

# Futsala

Guatemala City, Guatemala

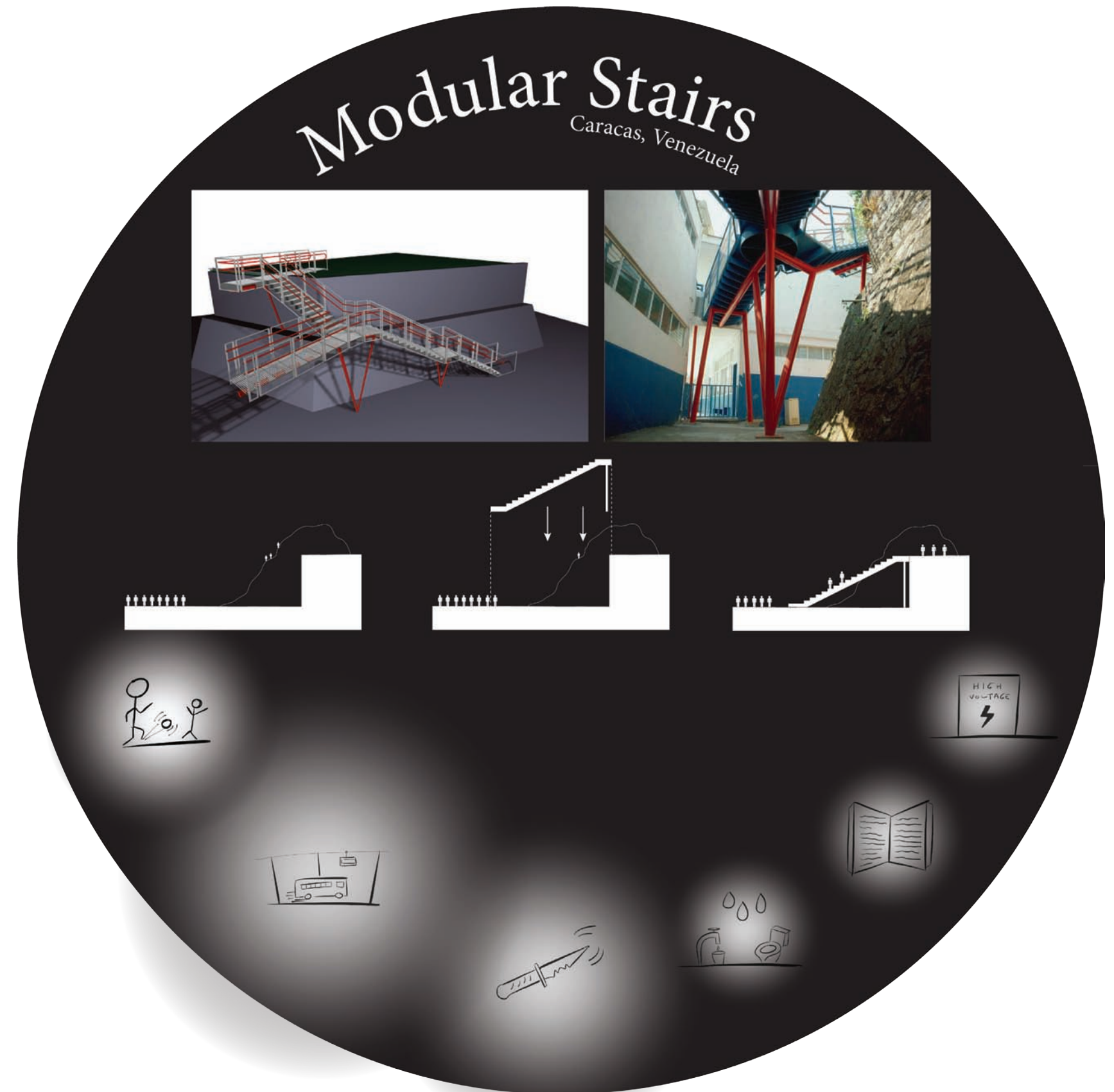


Futsala is a popular sport in Guatemala that is played like a miniature version of soccer. Unfortunately in many low-income portions of Guatemala there are very few spaces available for people to play the sport. This comes as result of the explosion in the population of Guatemala city and the difficult in maintain enough space for leisure to accommodate the increased population.

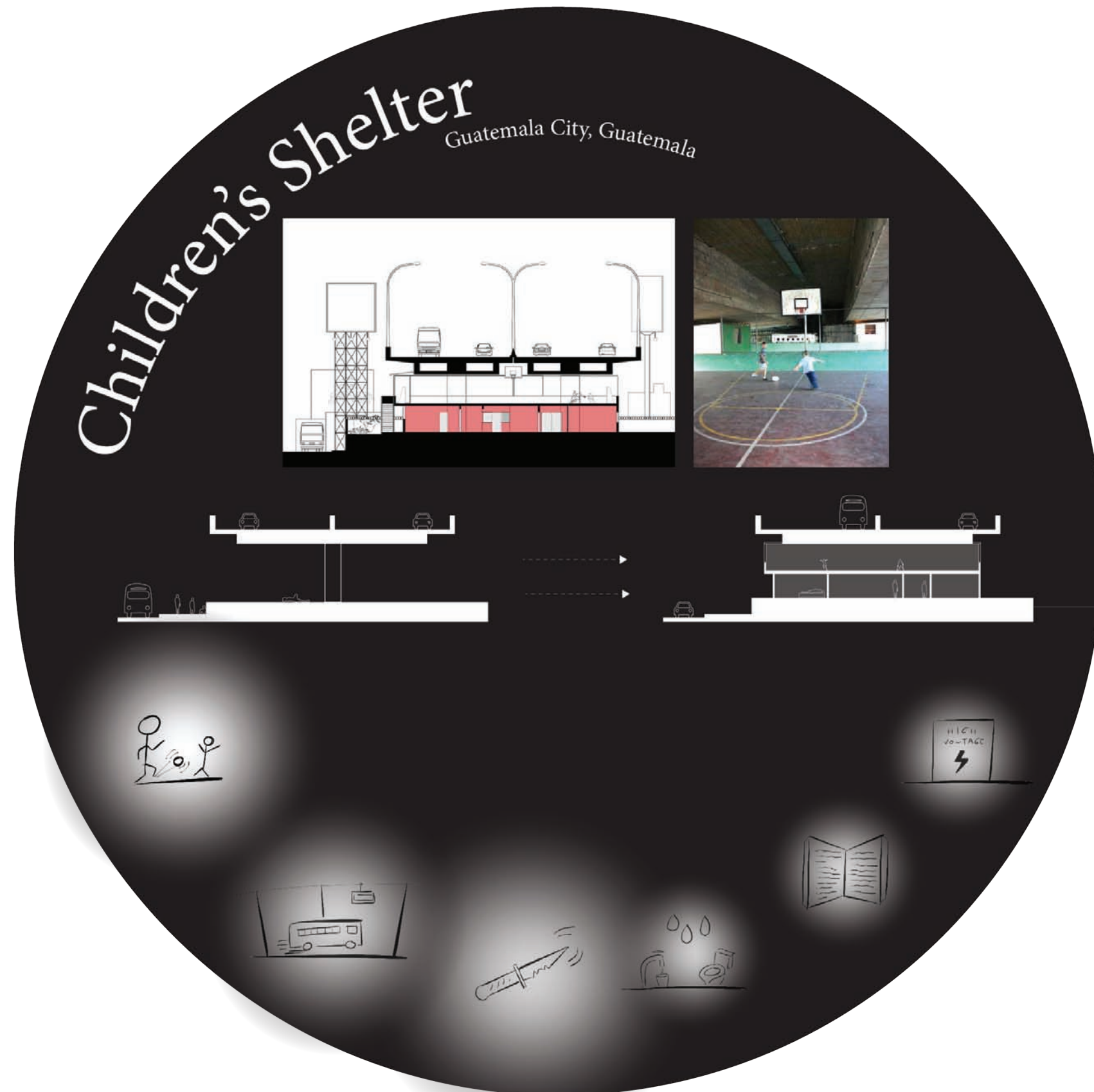
As a result the Buró de Intervenciones Públicas, Bureau of Public Interventions, hoped to introduce a series of new urban pitches to enable more play of futsala among the community members. These pitches will be placed on low traffic streets while incorporating adequate lighting and traffic conditions. This is in hopes to create more space that the community can engage and take ownership of. Each of the fields will have fluorescent ground paint, temporary goals, speed bumps to slow traffic as well as appropriate street markings and signage.

This project was the winning entry for a competition to create an egress and access system to navigate the 36ft elevation change that the campus of the British school in Caracas occupies.

An idea that emerged from this design was to create a pre-fabricated modular stair that could quickly, effectively, and cheaply be implemented in favelas to help navigate the terrain. The resulting design is made of steel and requires only two connections to the ground to stay supported. They were designed to be easily implemented as a way to create jobs accessible to the favela dwellers. A result of this is that there are only four main parts in each stair system; the tubular supports, the steps, counter steps and handrails. Further the modular stair is designed to not sit on the hill but be separated from the slope. This is to keep the stairs usable during heavy rainfall when the slopes can become streams of water and result in flooding.







This project takes advantage of the un-used space below a highway to create an orphanage for children with a recreational area and attached workshops.

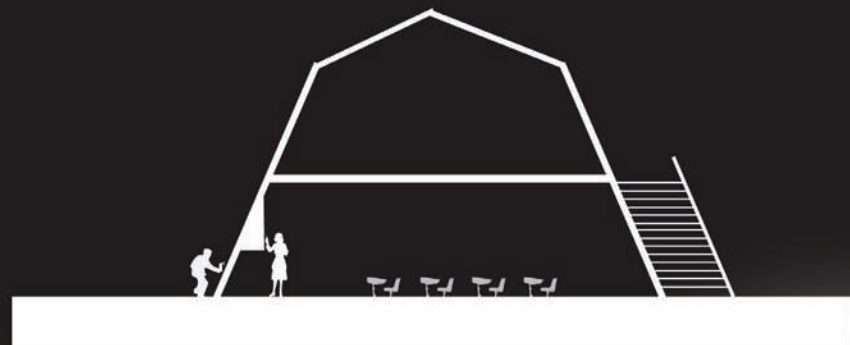
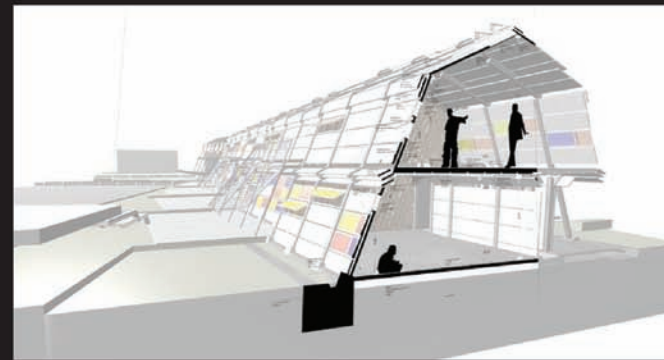
The underside of the highway in Carcass is an often ignored space only utilized by the local street vendors. In this case the space was utilized as a place to house 30 rooms for children. Above these rooms is the rooftop space that has a basketball court as well as a soccer area. Access to the soccer and basketball court is through an external garden that is used to grow small crops of corn. Along side the recreational area but still on the rooftop is a workshop. The hope behind this workshop is to teach trade skills and instill an entrepreneurial base in the community.





## Goodwill Project

Las Achiras, Puente Alto, Chile



The Las Achiras favela in Chile is a very problematic area with little help or intervention from the city government. This in combination with failing school systems of Chile does not help the situation.

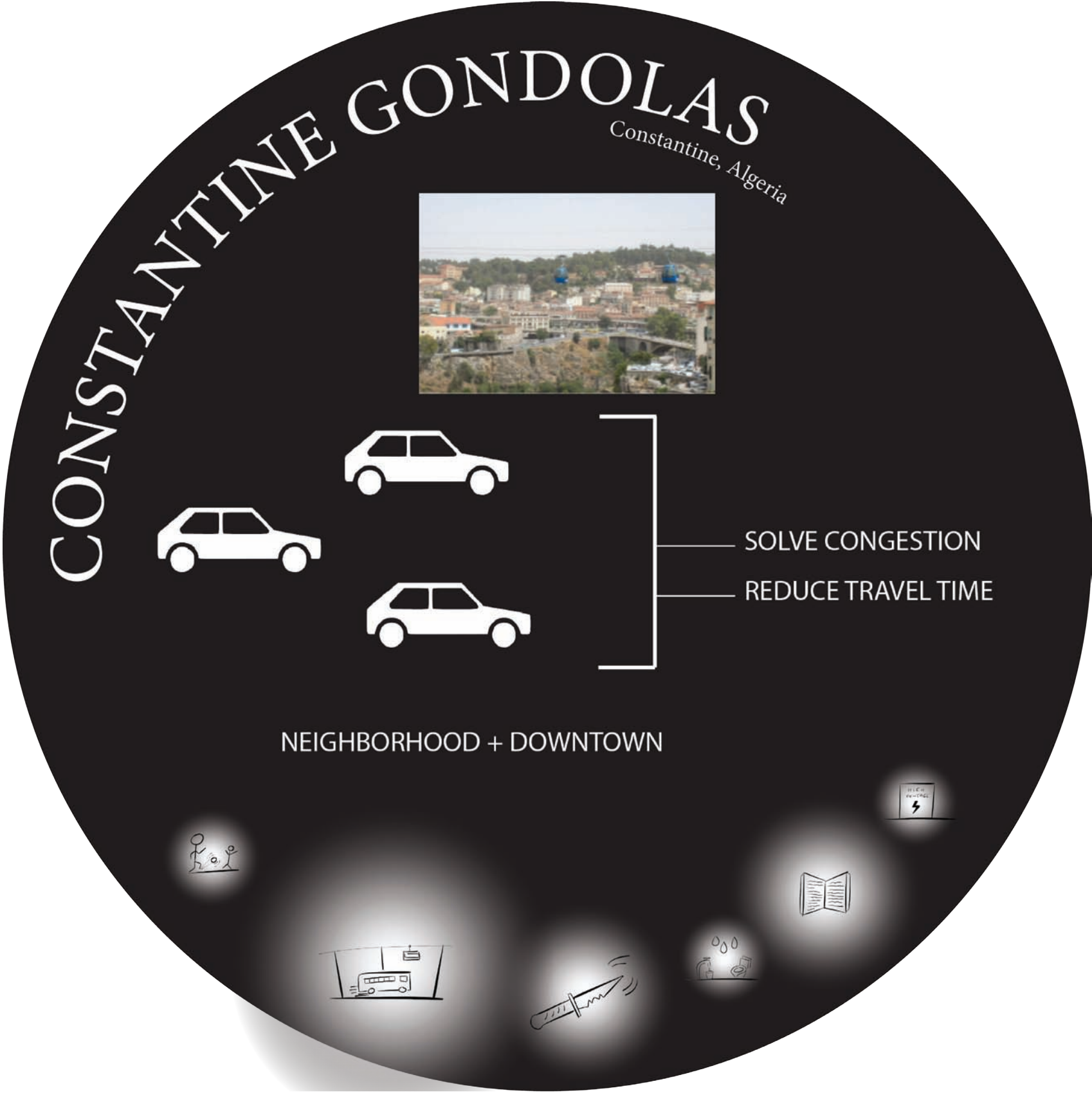
The problems of this area were created as a result of the massive growth of Puente Alto, which is the fastest growing city in Chile, in combination with the lack of government oversight and regulation in the city and its people. This created an environment rampant in crime and with little opportunity for the youth. Further adding to this problem was the fact that the schools were based on panoptical ideas and seemed more like prisons than like schools.

The resulting design attempted to address these issues and well as stay within its minimal budget. A concrete pre-fabricated modular system was chosen. What emerged from this proposal was a design with significant concrete surface area. This surface area would become a canvas for local graffiti artists to display their work.

When attempting to transform a city, the infrastructure necessary to do so is critical in transforming the context that surrounds it. This is the case when it comes to issues of security infrastructure because their creation in areas drowning in criminal activity allows for a sense of belonging that must exist in order to create transformation not only physically but in the hearts of the citizens themselves. This is the case with the CAI Periferico project in Medellin which focuses in transforming these government infrastructure buildings into points of reference within the informal but also the entire city context. The goal of this project was to bring government presence into an area that had typically been ignored in the past by the city government. As result, the project aims to bring control and security to the inhabitants of these crime polluted areas through the construction of 9 Cai ( police stations) that would surround the city and the slums in the hill sides. The construction of these edifices comes with social programs that aim at integrating the community into security decisions of the sector and in large scale impact the safety and quality of life in the city. . The light that radiates from the police stations allows the citizens to observe the newly introduced security presence from anywhere in the neighborhood. Thus the light gains a new meaning of hope but also of representation and protection.







Algeria for a long time has been affected by a long running civil war. However, since 2002 the country has been making an effort to reconstruct its infrastructure and improve the life of its inhabitants. Recently, the city has been utilizing cable cars to not only improve the infrastructure of Constantine but also the congestion that was felt by commuters coming from a part of the city that is located high in a plateau.

The goal was then to connect these neighborhoods in the plateau with those in the valley that have higher indexes of employment. The line created has not only reduced travel times but also improved the economy of the city.

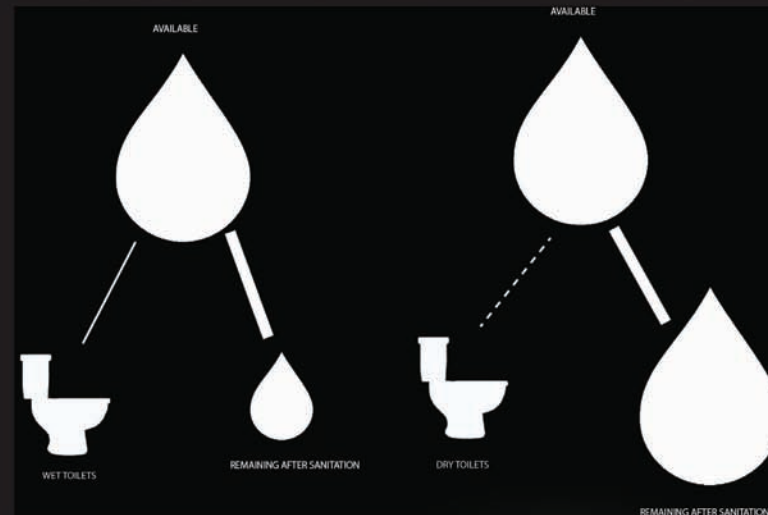


The biggest difference with this cable system is its use of “traditional local styles” [1] to create unique opportunities of esthetic design for the city. Most importantly, is the opportunity to create a system of transportation that serves for both tourism and mass transit. The system not only connects neighborhood and city but is incorporated into an amusement park, hotel, and zoo.



# Dry Toilet

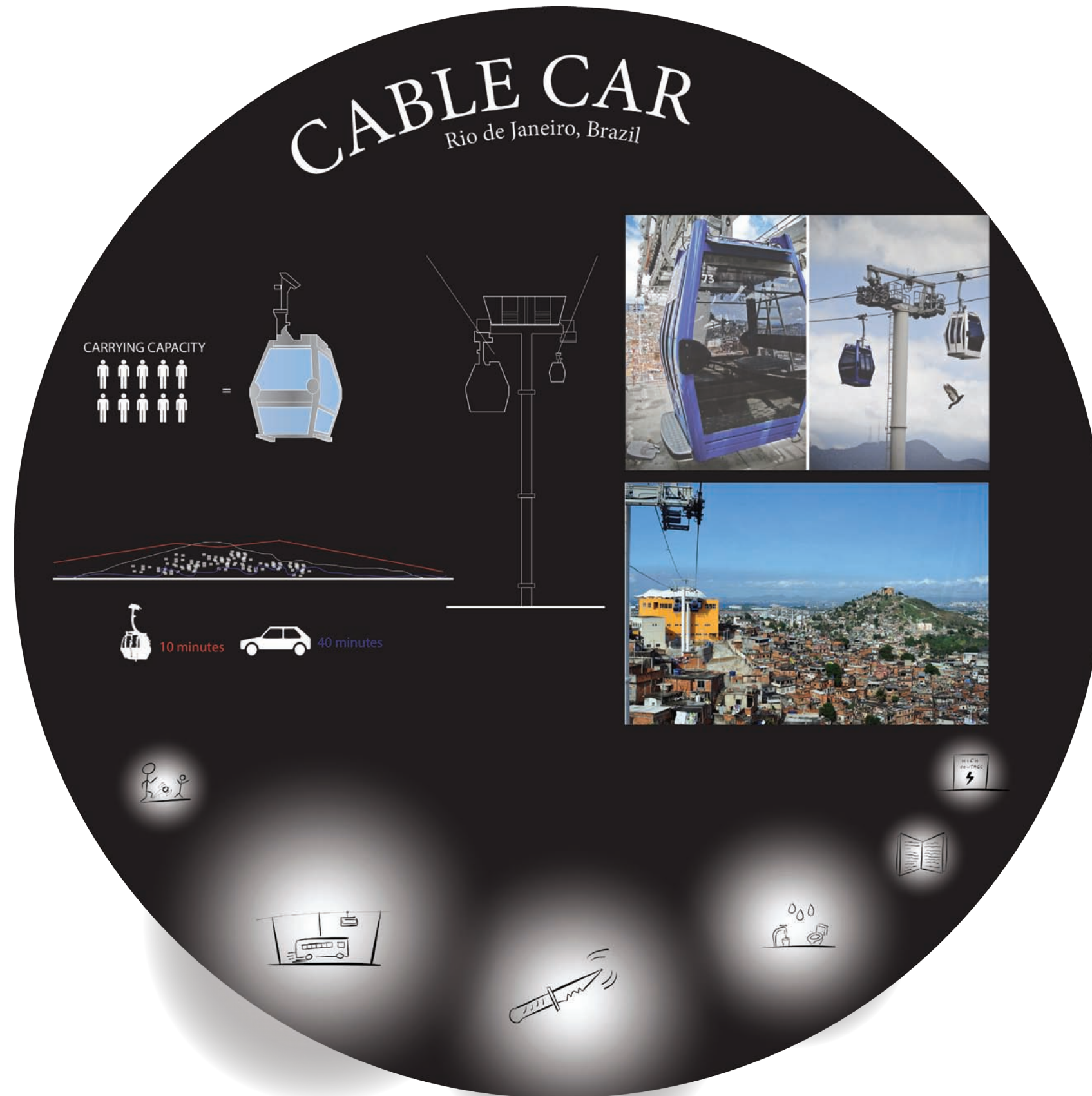
Caracas, Venezuela



The Dry Toilet is a project to bring a clean sanitary bathroom facility that does not consume clean water to Las Vega Barrio of Caracas.

In the barrios the extreme poverty makes every day amenities a luxury. Thus establishing a community toilet creates a resource that is accessible to all the barrio residents. But this also brings unique challenges. First the system must be simple, easy to maintain and easy to keep clean. Resources are not readily available in the barrios and thus the dry toilet must be able to adapt and accommodate to meet these conditions.

The significance of fresh water in the barrios cannot be understated. Water is needed by the residents for farming and crops. Thus the amount of water used to wash away waste and maintain a sanitary environment must be kept as minimal as possible. The dry toilet's ability not to need water becomes a big benefit. Further the project was built with local builders. The idea behind this was to create a self-sustaining system that does not need outside government support or intervention with the hopes of initiating community involvement and ownership.



Rio de Janeiro is taking the initiative of Caracas and Medellin and is applying the metro cablesystem into the favelas of Alemão. The project like the ones in other Latin American Countries is part of an urban revitalization program started by former president Luis Inácio Lula da Silva. Ranging from the establishment of basic sanitation through urban organization the project aims to improve the connectivity of the city with that of the hillside neighborhoods in a way that strengthens their relationship. The gondolas serve 120,000 people in total and the carrying capacity is of ten people per unit. Furthermore, the gondolas can carry 3,000 passengers per hour and move continually through stations. At the base the cable car connects with other forms of public transportation like the subway and bus system. While the creation of infrastructure was important it was also critical to create financial and social incentives because this was a neighborhood whose social mobility had for a long time been halted by problems in drug related crimes. The most important part of this work of infrastructure is probably the construction of "39,000 meters of water lines, 42,000 meters of sewage lines, 153,000 meters of paved streets, and 22,000 "meters of drainage.



The Skikda gondolas are a separate network that instead of connecting neighborhood and valley improves the connectivity with two neighborhoods.



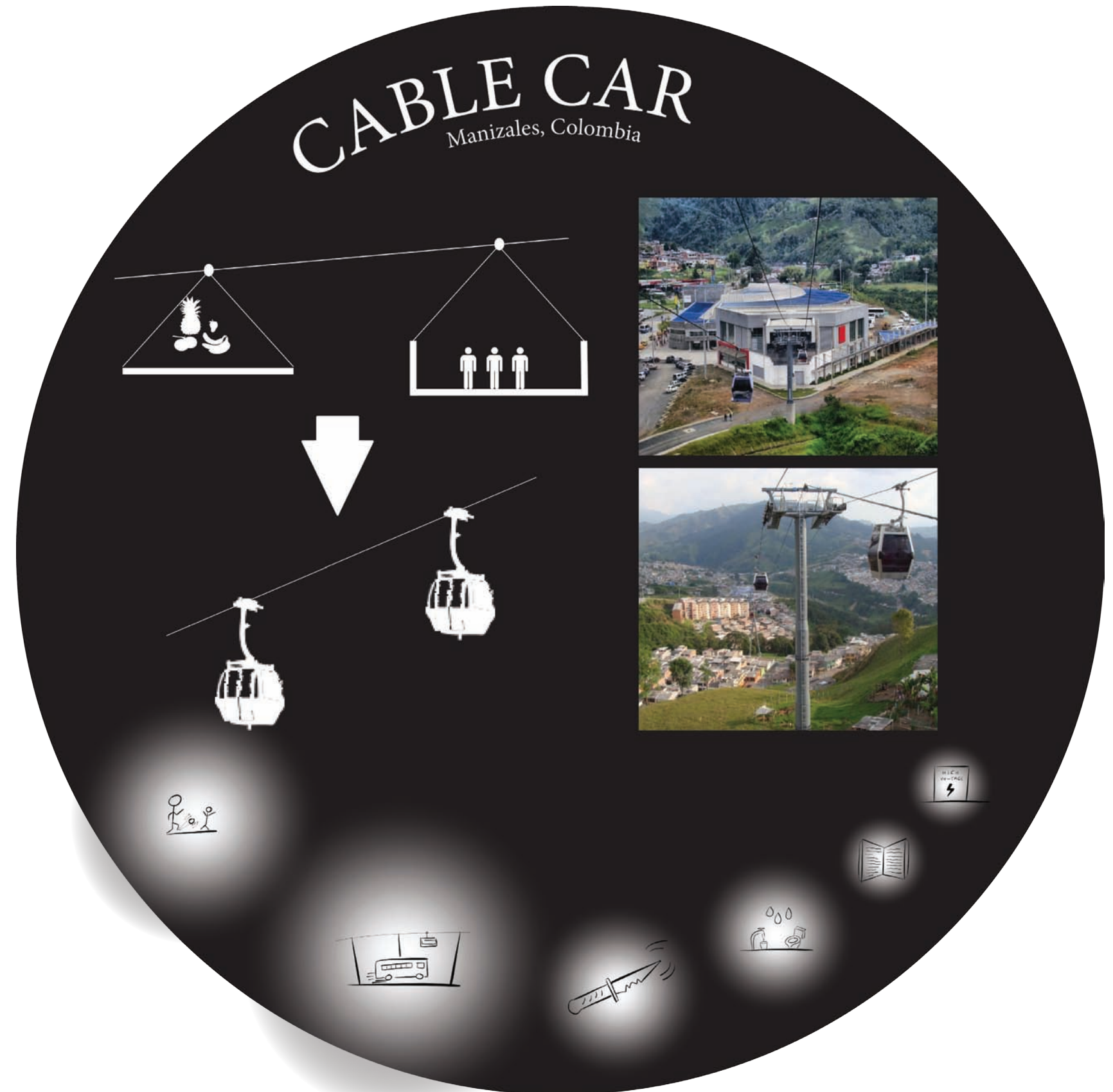
Manguinhos is a district located in the northern part of Rio de Janeiro where approximately 10 favelas reside. The population of this district ranges to about 28,000 many who live quite close to a nearby industrial complex. The neighborhood suffers from high rates of violent crime and lacks many community and public amenities. The architect Jorge Mario Jáuregui from the firm Metrópolis Projectos Urbanos began studying the district through research of its urban layout. More importantly the firm conducted interview with the inhabitants of the area and questioned them in regards to the problems they saw in their own community. After analyzing the data gathered from both the community and professionals it was decided that the railway that bisects the district needs to be elevated in order to take advantage of the pedestrian level community interaction. Furthermore, a park was planned to be the best option to connect these two halves of the community. Additional accoutrements such as, scenic walkways, bicycle paths, and athletic fields were considered necessary for the pedestrian densification of this linear space. Replacement housing was incorporated into the design to allocate those families that would temporarily affected by the construction of the public space. Favela Barrio Infrastructure Intervention.





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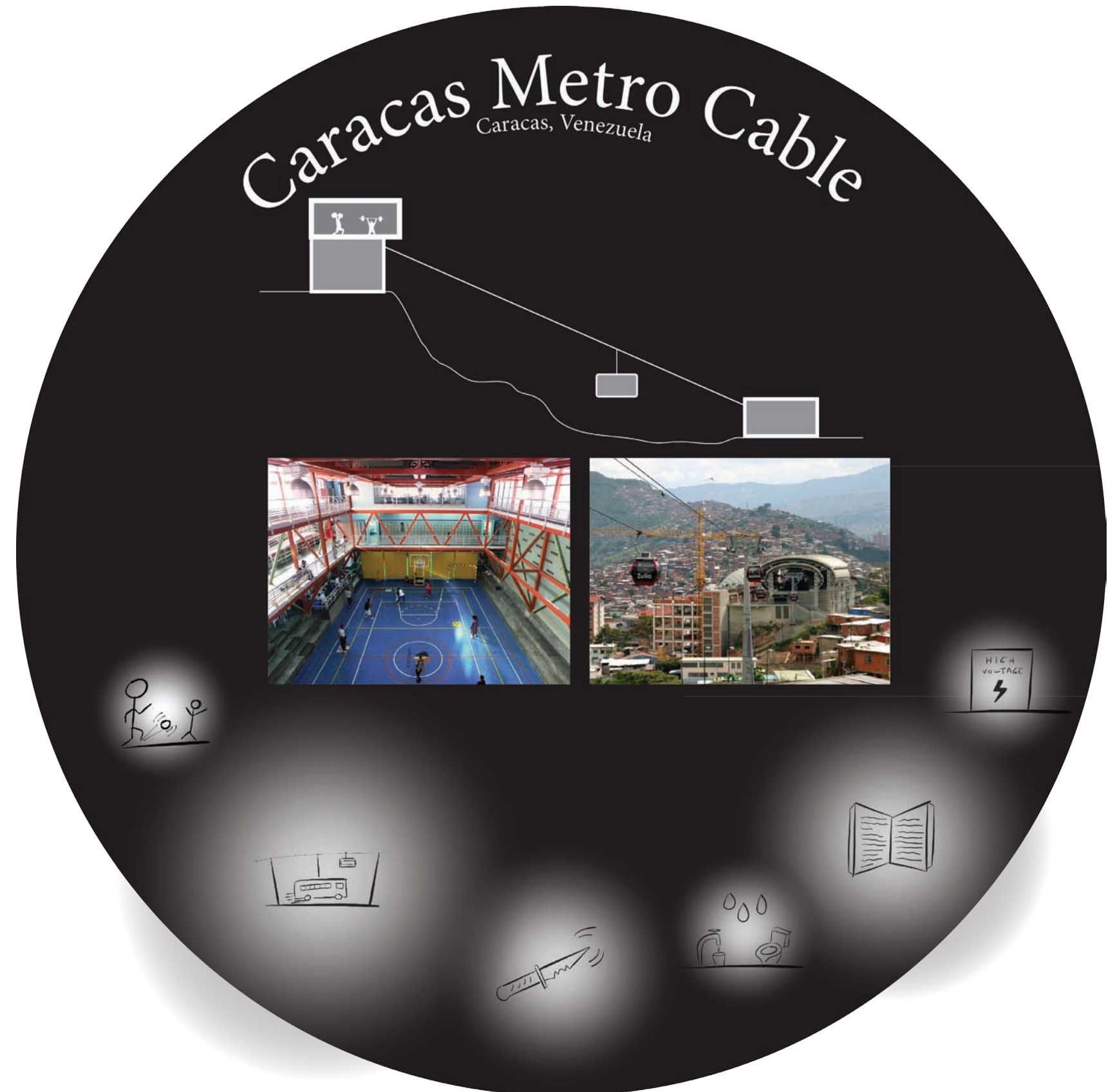
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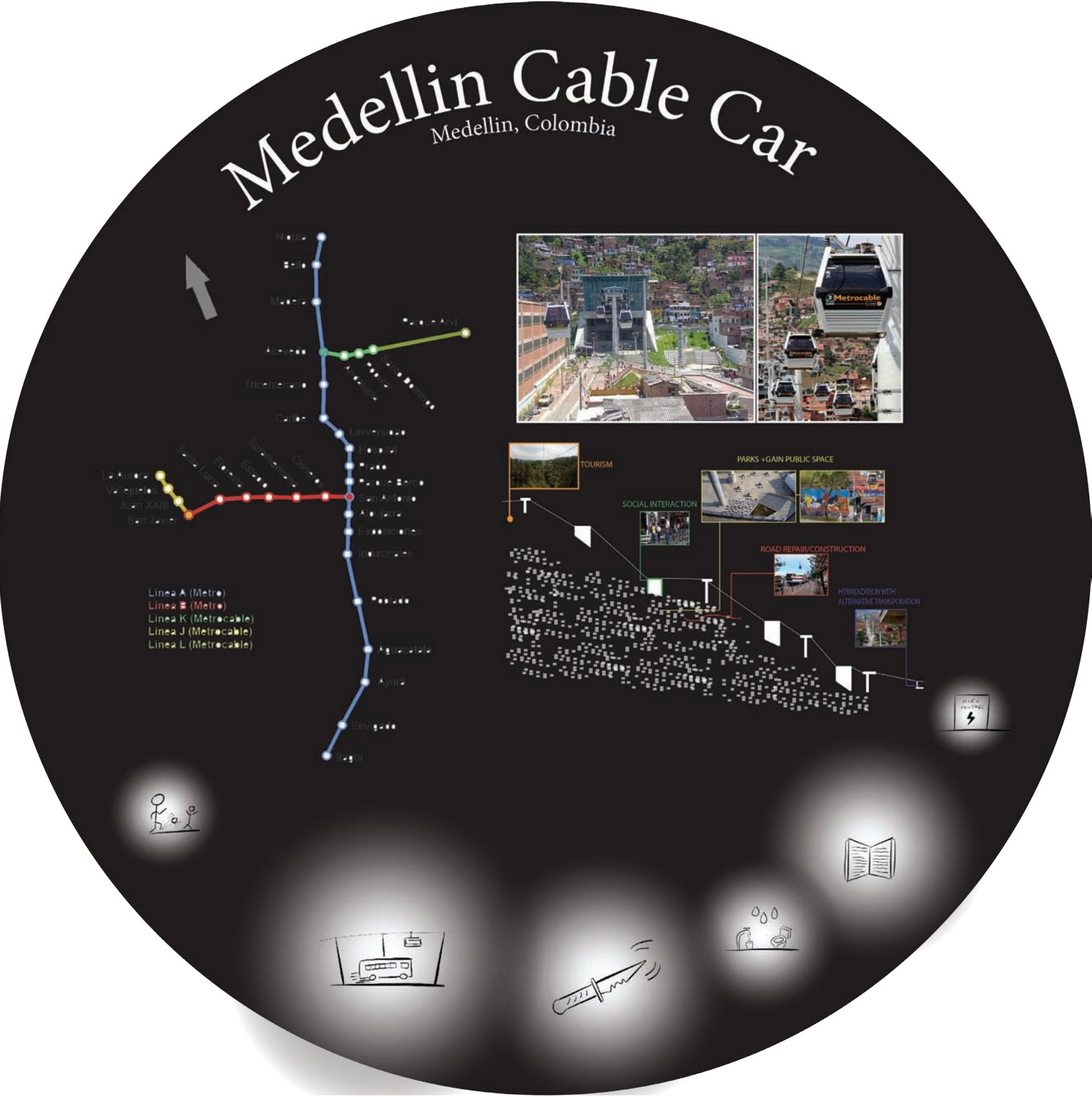
This project introduces a cable car gondola system into a Caracas favela. The project attempts to connect the people high up in the favela with the occupants of the lower formal city.

The project not only wanted to connect the favela with the conventional city but also wanted to give more to the people of the favelas. To do this Urban Think tank took the stations where the cable car stops as an opportunity to integrate programs into the community. Vertical gyms, libraries and community gardens are ways that were used to programatize the cable car's stations. Another important part of this system was its integration into the existing city's public transport. This is what allows the members of the favelas to be truly connected to the rest of the city.

The success of this project comes from enable the people of the favela to more easily and quickly navigate the difficult terrain while also link the favela to the rest of the city.







While other cable car systems have focused on connecting informal settlements with the formal city. The Manizales cable car focuses on creating a system of transportation that is fast and can easily maneuver in the city's Andean mountainous topography. The network of transportation still serves to connect the city and in way heal the many years of unplanned urban growth. The difficult topography of Manizales has created hardships when it comes to the construction of roads, highways, and boulevards for the interconnecting the city. Furthermore, it was critical to create a system of transportation that is clean and reduces CO2 emissions in the city. Its impact on the context at ground level is of importance because most of the land that needed to be connected was occupied by pre-existing buildings. The resistance to time provided by the cable car provides security of mobility in the future. The ultimate goal like the other cable cars is to better the quality of life of the people who are part of the regular and irregular urban context. In the past the city had already used cable cars to transport not only people but also goods predominantly fruits and coffee. These cable cars were first built in 1915 and had an extension of 71.8 kilometers ( the longest in the world).





# Infrastructure Group

*Sriraram Chintamaneni | Leandro Cortez | Can Cakmak*

In•fra•struc•ture

*noun*  
The basic physical and organizational structures and facilities (e.g., buildings, roads, and power supplies) needed for operation of a society or enterprise.

Formal

- 1] Infrastructure
- 2] Occupancy

Informal

- 1] Occupancy
- 2] Infrastructure

Infrastructural Interventions



Electricity.



Entertainment.



Literacy.



Transport.



Crime.

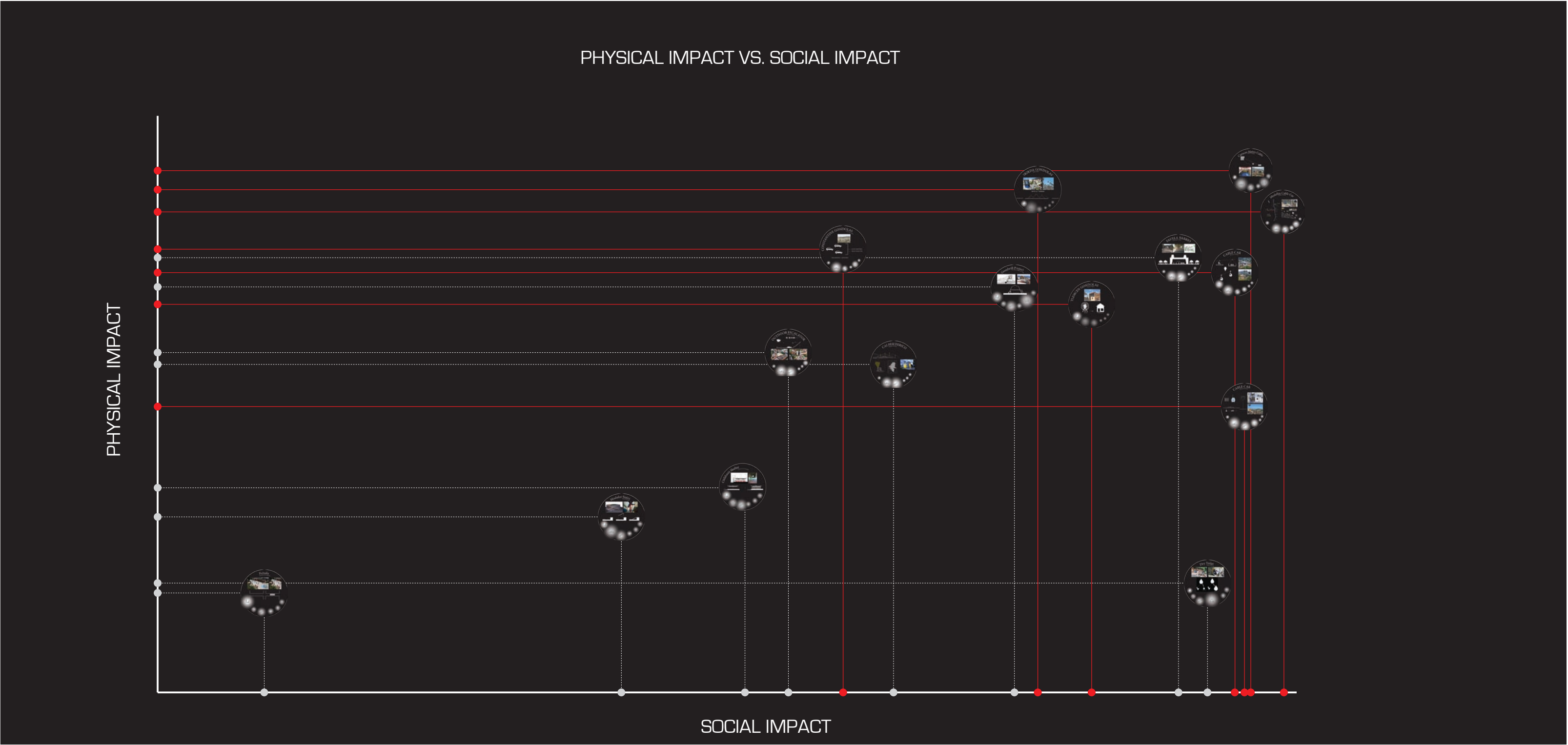


Water/Sewage.



Global Infrastructural Precedents  
Interventions in cities. Hybridizing urban sectors.







# Isolating Gondola/Cable Car Projects













