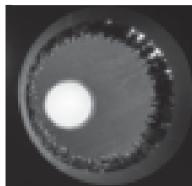


# Favela Babilonia and Chapéu Mangueira

Archea

Rio de Janeiro



project: Archea  
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collaborator: Ministero dell'Ambiente  
e della Tutela del Territorio  
e del Mare and Prefeitura do Rio  
de Janeiro  
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mario Occhiuto architecture  
structure and systems consultant:  
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photo by Leonardo Finotti

[www.archea.it](http://www.archea.it)



The project "Living the Community" has focused on the favelas of Babilonia and Chapéu Mangueira, located behind the Bairro do Leme, which have already been involved in the Morar Carioca project, launched by the Prefecture of Rio de Janeiro. The research is ordered by Forum das Américas and developed by Archea Brasil together with a team of professors teaching at Italian and Brazilian universities, assisted by specialized consultants for aspects related to architecture, systems and technologies. The project suggests new intervention strategies that may serve to upgrade the spontaneous urban systems of Rio de Janeiro. The city, which is currently undergoing a process of transformation and renewal feels the need for an eco-compatible transformation of much of its "informal" building heritage. This proposal, requested by the Italian Ministry for the Environment and Protection of the Territory and the Sea, represents an integration of that project. Favelas, or rather comunidade, conurbations which have formed spontaneously to meet the pressing need for housing for the urban proletariat since the late Nineteenth century, represent a reality of physical and social degradation that is no longer compatible with the city's new political ambitions and strategies of global assertion. The complete separation and segregation of these areas from the rest of the metropolis, and especially from the legal residential areas defined as the "formal city", in addition to the lack of services and infrastructures, the insalubrious conditions, the criminality and the more or less total lack

Il progetto "Abitare la Comunità" si concentra sulle Favelas Babilonia e Chapéu Mangueira, ubicate alle spalle del Bairro do Leme, già coinvolte nel progetto Morar Carioca sviluppato dalla Prefettura di Rio de Janeiro. La ricerca portata avanti da Archea Brasil assieme ad un team di docenti provenienti da alcune università italiane e brasiliane con la consulenza per le parti architettonica, impiantistica e tecnologica, di tecnici e specialisti di diverse discipline, propone nuove strategie di intervento utili alla riqualificazione dei sistemi urbani spontanei di Rio de Janeiro.

La città, attualmente al centro di un processo di trasformazione e rinnovamento connesso con gli importanti eventi internazionali programmati nei prossimi anni, dai campionati mondiali di calcio del 2014 alle Olimpiadi del 2016, sente l'esigenza di una trasformazione eco-compatibile di gran parte del patrimonio edilizio della città "informale". Le favelas, o meglio, comunidade, conurbazioni nate spontaneamente per rispondere alle pressanti necessità abitative del sottoproletariato urbano a partire dalla fine dell'Ottocento, rappresentano una realtà di degrado fisico e sociale ormai incompatibile con la nuova politica e le strategie di affermazione globale della città.





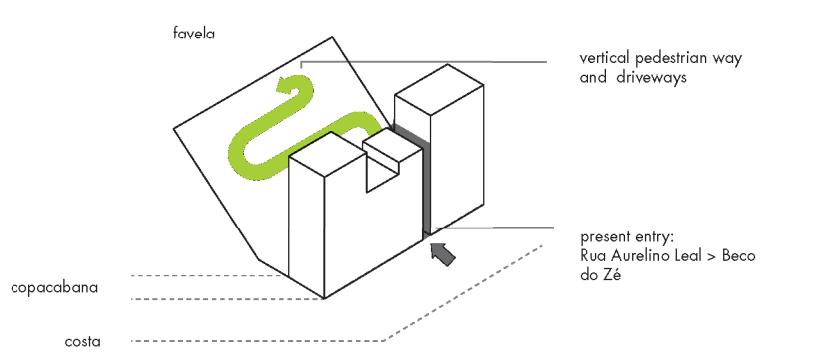
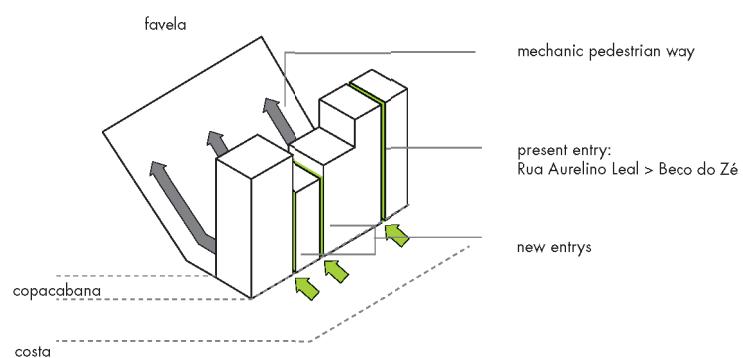
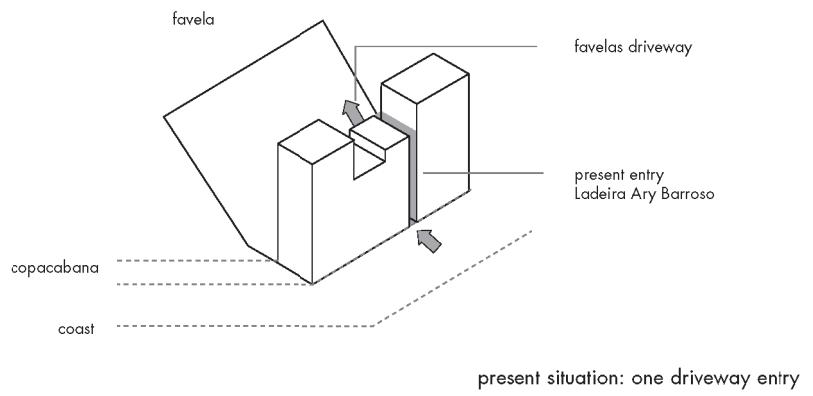
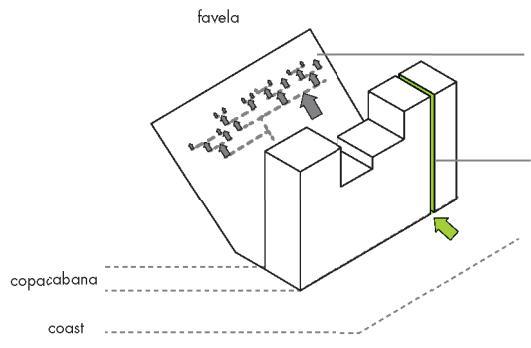


In the previous page:  
escalator, pedestrian link  
from Rua Anchieta to  
Beco di Zé square.

Localization of Leme  
Favelas in Rio de Janeiro  
in white the boundary  
of the district of Leme.  
In green borders of the  
Favelas (left).

Urbanized areas (bottom)





The general strategy recommended for the strengthening of relations between "formal city" and "informal city" passes through two primary actions:

- to increase the number of pedestrian access from sea to mountain
- to enhance driveway access with an electric shuttle system





insertion area of the reclimbing  
mechanized system

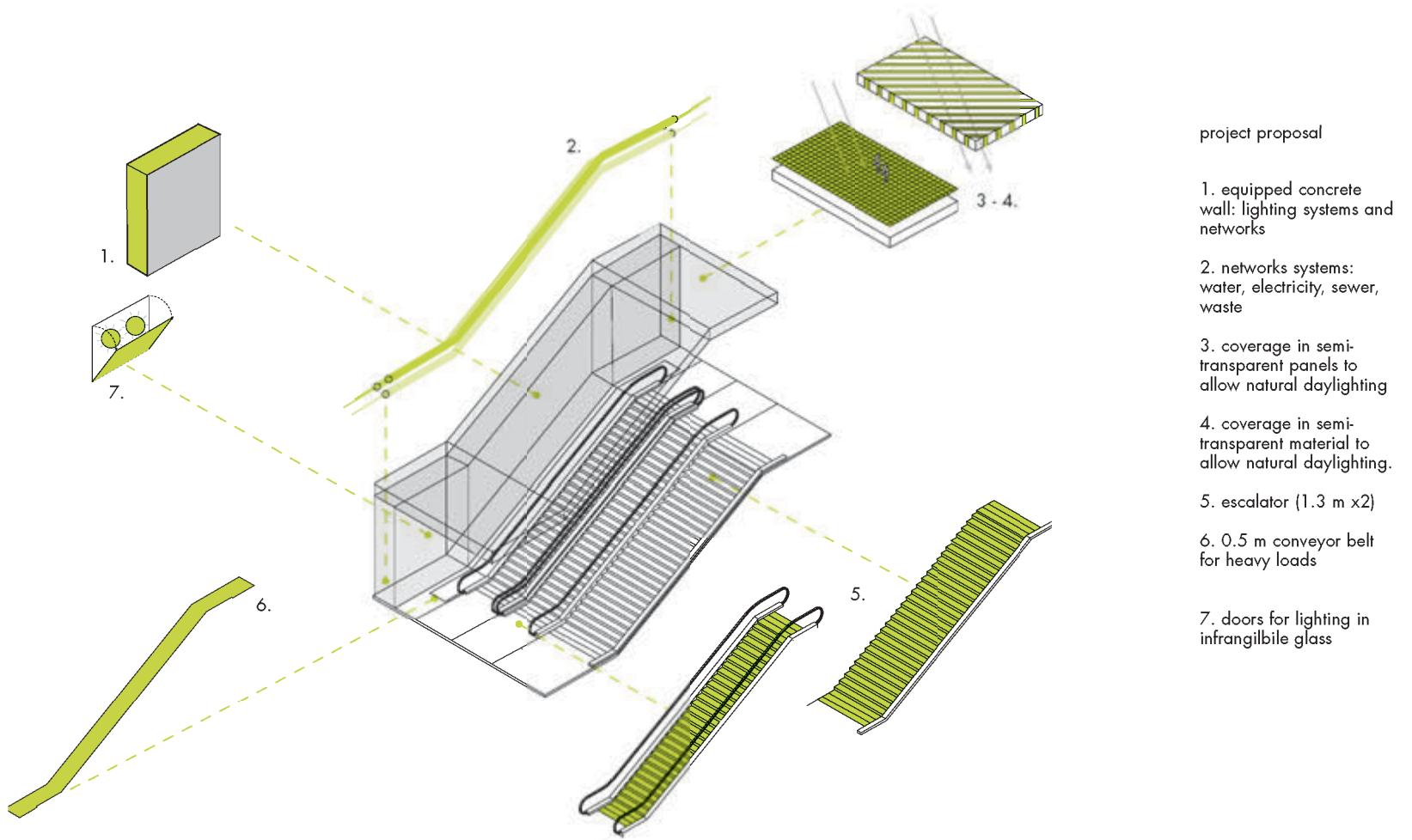
↔ new pedestrian access

↔ access road

— new driveway entrys

private pedestrian entrys to the dwellings

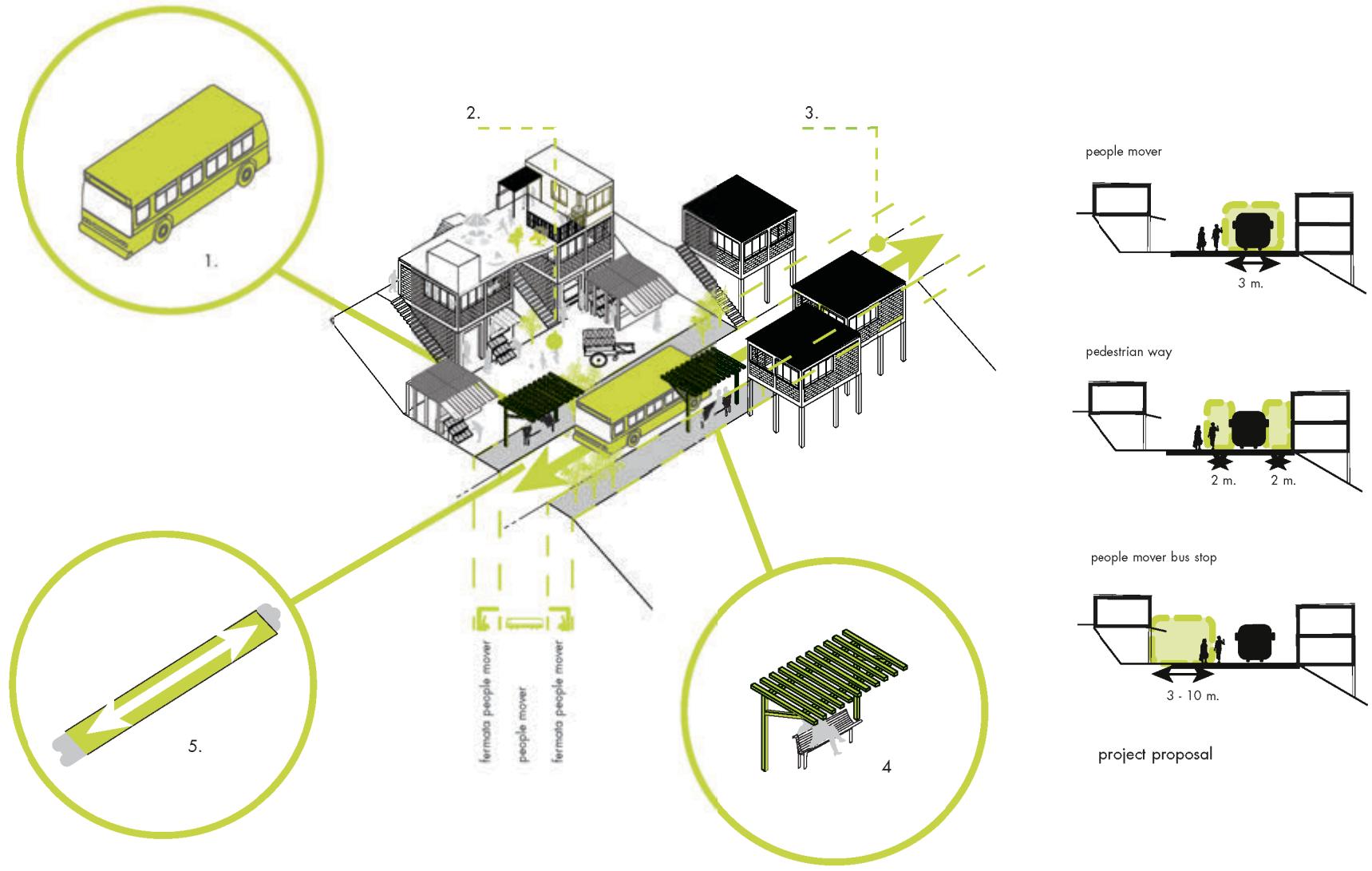




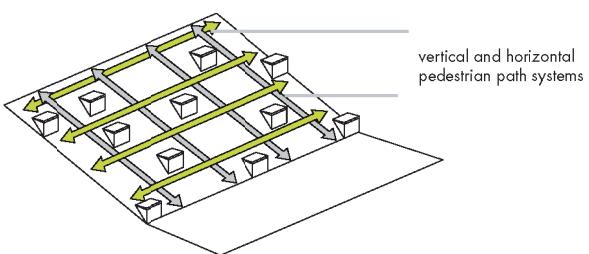
At the architectural level are proposed two possible methods of implementation: the first is related to the inclusion of a system of mechanized stairs to facilitate the mobility at pedestrian access.

A second system is constituted by a series of lift-towers that will be located near the landings of escalators and lead the residents on the highest bands of Favela. Towers also conceived as a small support facilities for the installation of technologies to improve the life quality of the community.

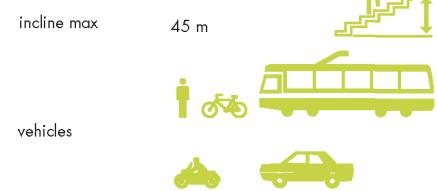
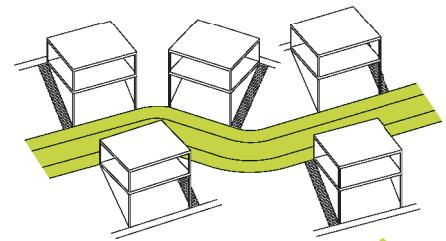




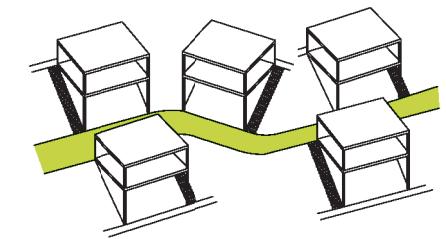
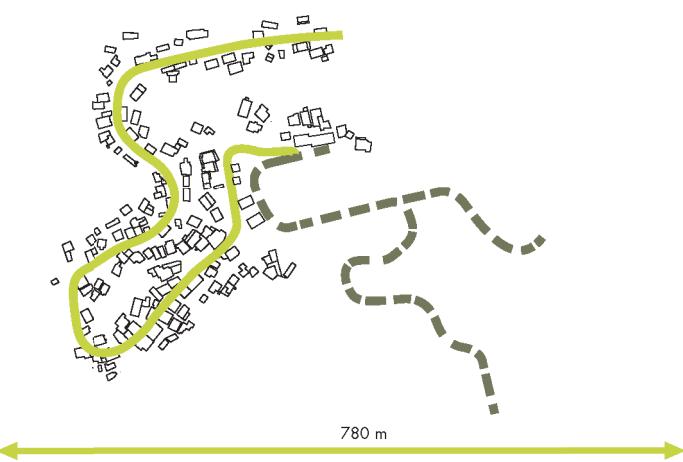
The paths within the community are developed mainly along the sea-hill axis, facing the slope on which stand the Favela houses with steep and winding staircases. The hypothesis proposes a system of paths and connections parallel to the coastline that enhances the exploitation of the coplanar traits creating a model with terraces, typical of the Mediterranean settlement.



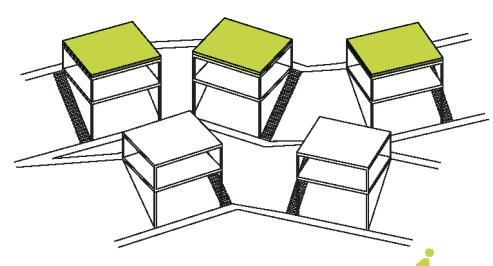
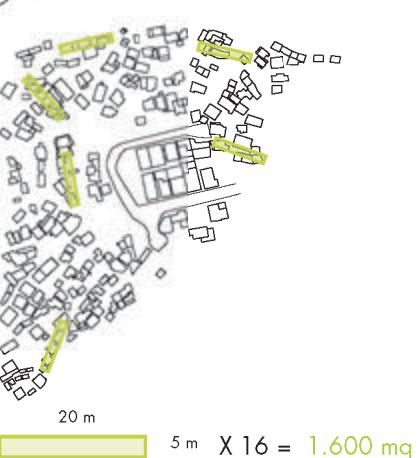
A cycle-vehicular road access to the Favelas

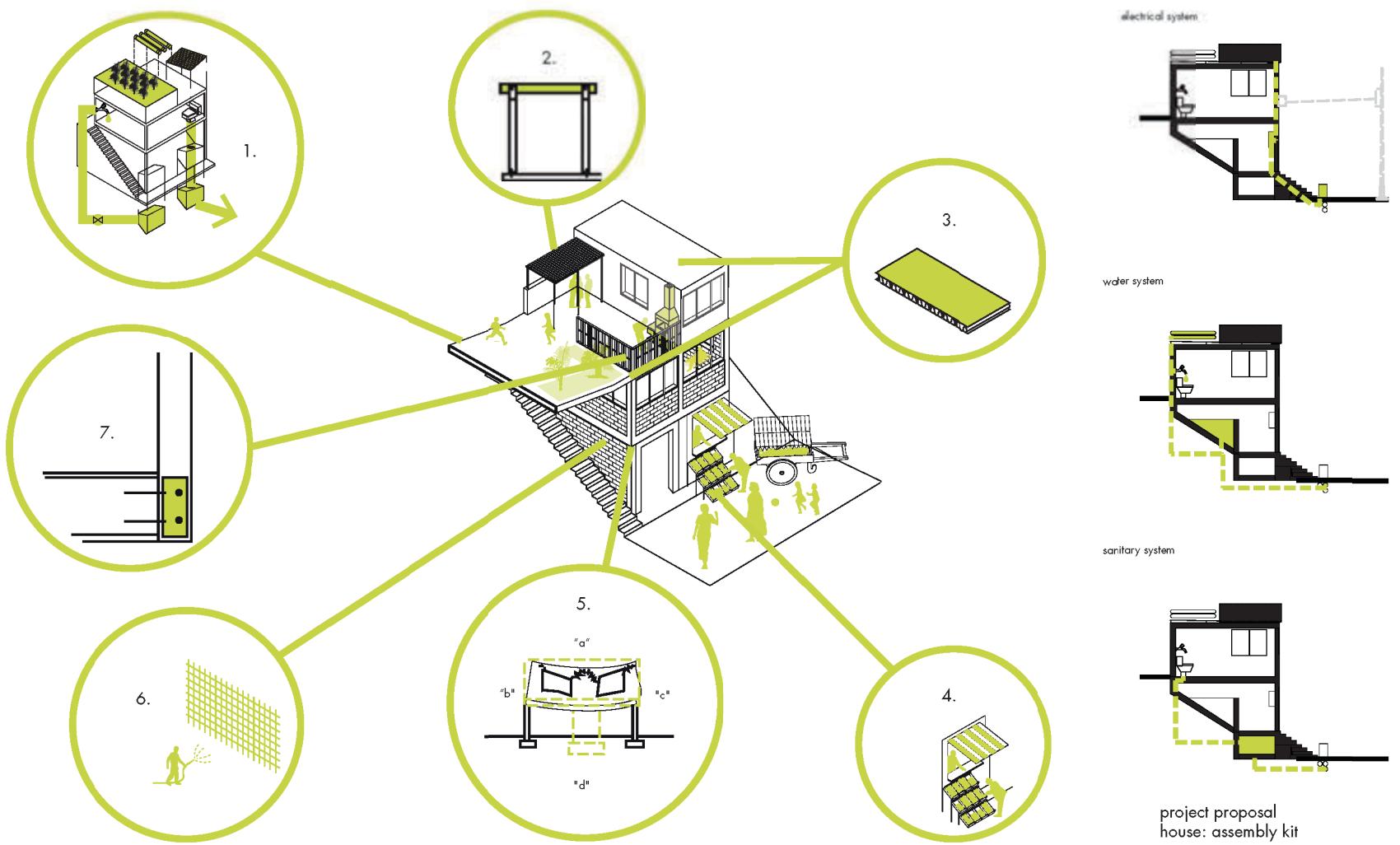


B Morar Carioca project: new internal driveway



C Pedestrian access to private houses







1. house: a small sustainable device

2. wooden shed:  
pillars 100x100;  
beams 150x100

3. roof and added room:  
SIP Panels  
(Structural Insulated Panels)

4. temporary commercial structures at the ground floor

5. consolidation  
a. new wall if the existing one is damaged resisting horizontal loads  
b. damaged walls consolidated with shotcrete  
c. new beams in the floor  
d. new pillar to support the deformed beam

6. consolidation of damaged walls

7. wooden balustrade 100x50 anchored to the roof with studded steel angles

The design strategy also aims to raise residents awareness to adopt a sustainable behavior. The board system will operate as general collector to intercept both the black water that rain water that will be treated and put back for domestic use and irrigation. The new towers are equipped with photovoltaic panels for public lighting, telephone repeaters, Wi-Fi repeaters, transformation equipment, water tanks for public use.

The static consolidation of existing houses suggests the possibility of exploiting the basement and cover, both as expansion of domestic activities that currently take place at the medium level, both to introduce new activities such as shops, laboratories, as well as terraces, gardens and additional rooms to respond to the family growth.

La totale separazione e segregazione di queste aree dal resto della metropoli, in particolare dalle zone residenziali legali definite "città formale", oltre alla carenza di servizi, di infrastrutture, l'insalubrità, la criminalità e il pressoché totale abusivismo che si concretizza in una diffusa precarietà statica e funzionale del costruito, richiedono interventi urgenti ma ponderati rispetto all'enorme massa edificata per la quale appare improponibile la demolizione su vasta scala.

La strategia progettuale proposta si muove all'interno della lettura delle azioni primarie di una difficile esistenza quotidiana: entrare, muoversi, abitare, relazionarsi e vivere sostenibile. Il progetto, sostenuto da un'importante fase propedeutica di analisi dell'esistente, intende proporre nuove soluzioni operative che muovono dalla scala architettonica e urbana alla scelte tecnologiche e di sostenibilità rivolte ai moradores della zona al fine di sopprimere alla separazione tra "città formale" e "città informale". L'incremento e lo sviluppo di una più facile accessibilità attraverso la creazione di nuovi percorsi pedonali, scale mobili, torri ascensore e servizi di trasporto pubblico, oltre l'incremento della rete di telefonia mobile e la creazione di una connettività diffusa, consentiranno una ricomposizione urbana e sociale auspicata e ricercata dall'intero corpo dei cittadini di Rio.

of building permits resulting in statically and functionally precarious buildings, call for urgent interventions that must nevertheless be well-pondered, as it would be impossible to demolish such a vast quantity of built tissue. The suggested planning strategy is inspired by a reading of the primary actions of a difficult day-to-day existence: to enter, get around, live, relate to others and to live sustainably. The project, aided by an important preparatory phase of analyses of the existing reality, aims to propose new operational solutions ranging from the architectural and urban scale to technological and sustainability-oriented choices intended for the moradores of the area, in order to bridge the gap between "formal" and "informal" city. More and more comfortable points of access through the creation of pedestrian routes, escalators, elevator towers and public transport services, in addition to a more developed mobile telephone network and widespread web accesses, will make it possible to achieve an urban and social desegregation that is desired and sought for by everyone in Rio.