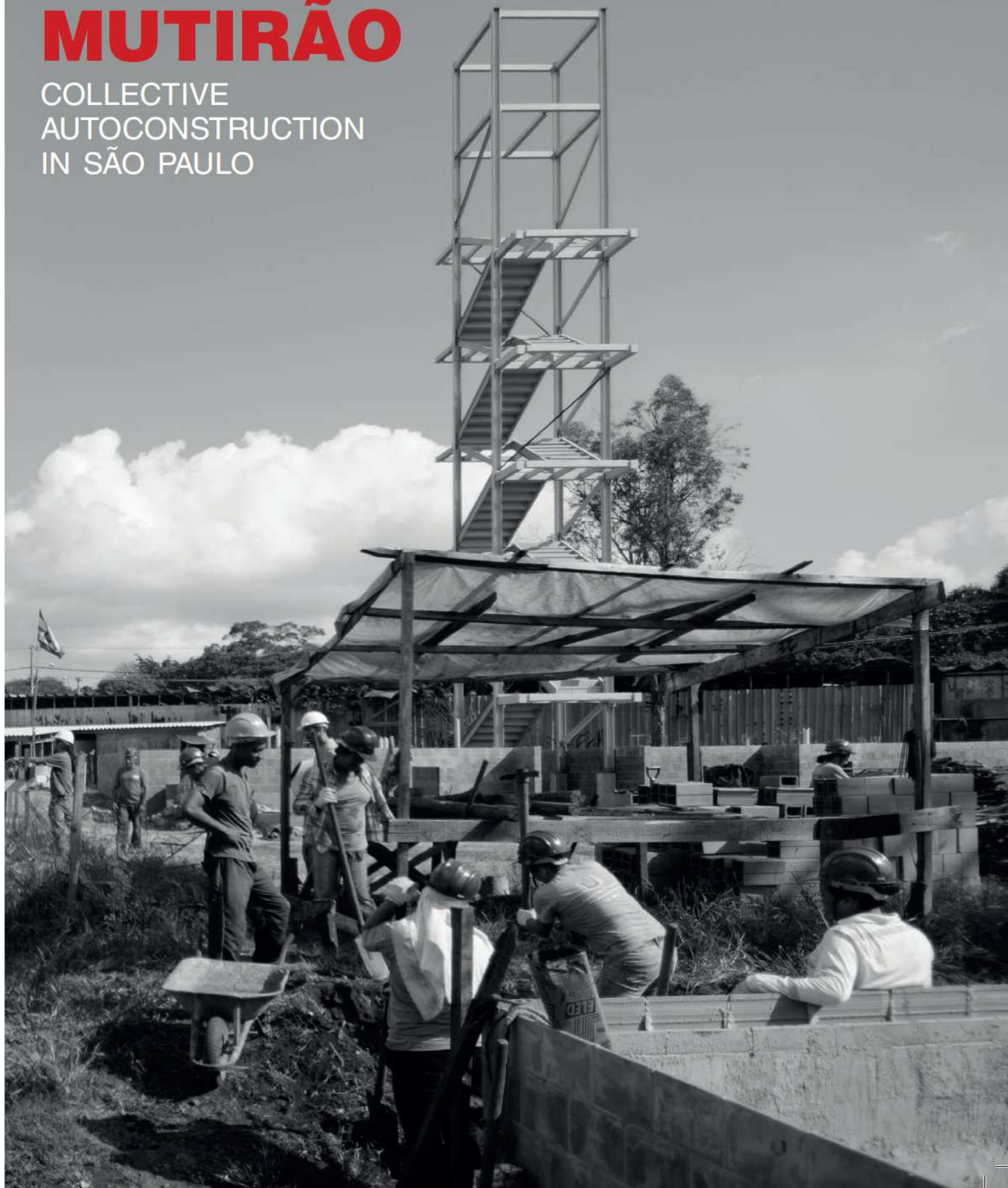


MUTIRÃO

COLLECTIVE
AUTOCONSTRUCTION
IN SÃO PAULO



MUTIRÃO

COLLECTIVE AUTOCONSTRUCTION IN SÃO PAULO

MUTIRÃO

COLLECTIVE AUTOCONSTRUCTION IN SÃO PAULO

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MASTER'S THESIS FILE

Students:

Loranne Colla
Clementien Peeters
Caroline Preud'homme

Title: Mutirão, collective autoconstruction in São Paulo

Abstract:

The main aim of this research is to unravel mutirão projects and experiences in São Paulo. Mutirão is a common Brazilian notion to name collective mobilisations and mutual help. The notion evolved from a term that was used to specify the mutual help amongst farmers during harvest to a broad range of 'communal' practices, with collective building as its most remarkable articulation. The latter meaning of mutirão as a distinctive form of communal self-help building with an indissoluble connection to self-management in a context of social housing is the precise topic of this research.

The research consists of three main chapters: I. PAST, II. PRESENT and III. FUTURE. As in a trilogy, every chapter can be read as a standalone entity, while at the same time the whole provides an extended chronologic narrative. Through the three parts, a timeline forms the backbone of the story, shifting its focus from (I.) years to (II.) months and days, to (III.) a leap towards the future.

Chapter I. PAST discusses how mutirão emerged and evolved throughout the last decades of the 20th century. Five case studies of mutirão projects in São Paulo's periphery are analysed to unravel the concept of mutirão on the basis of its concrete presence in the city. In a chronological way, it narrates the increasing and increasingly organized struggle of social movements and their housing aspirations. This part aims to unravel the low-income population's struggle for participation and autonomy in the construction of housing.

In Chapter II. PRESENT the timeline shifts in scale, shedding light on the present condition of mutirão in São Paulo by using two ongoing mutirão projects of Usina, localised in the eastern periphery of São Paulo. The two projects, named Cinco de Dezembro and Parque São Rafael, will form the backbone to explain the different phases of a contemporary mutirão project in depth. They are in distinct phases and thus form the ideal base to gain a more complete notion of mutirão in the present-day situation.

The evolution of mutirão is significant and mutirão seems to find itself on its tipping point. More and more, this very distinctive way of developing a low-income housing project becomes restricted by rigid and standardized regulations. Meanwhile, also social movements and assessorias técnicas increasingly doubt the benefits of complete self-managed and self-constructed projects. In chapter III. FUTURE, the project 'Parque São Rafael' will be used as a laboratory to experiment with different future scenarios. Designs will be tested as valuable means to unfold critical reflections on the past and present condition of mutirão as a particular approach to design and construct, as a way to explore new modes of 'doing' mutirão, and as an attempt to actively contribute in the ongoing participatory process carried out by Usina and MST Leste 1. In particular, the design exploration seeks to inform the participatory process with larger urban-scale design scenarios, imagining a social housing production that embraces the agency of social movements while emphasizing the importance of design.

Thesis submitted to obtain the degree of Master in Engineering: architecture.

Promotor: Prof. Dr. ir. Bruno De Meulder

Tutor: Jeroen Stevens

Local promotor: Pedro Fiori Arantes

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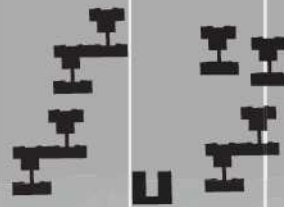
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*"Quem é você pra me dizer como se assenta um tijolo?
Quem é você pra me dizer o que é construção?"*

*"Who are you to tell how to place a brick?
Who are you to tell me what construction is?"*

- Sou mulher, Tiarajú Pablo D'Andrea

PROLOGUE

SETTING THE STAGE | *CRIAR O CENÁRIO*



AN UNCONTROLLED URBAN SPRAWL CAUSED AN EXPANSION OF THE URBANIZED AREA THAT WAS NEITHER PREDICTED NOR FORESEEN. THE CITY'S VAST AND FAST GROWTH IS PARALLELED WITH AN INCREASING HOUSING DEFICIT. VIEW ON THE FAVELAS IN CIDADE TIRADENTES THROUGH THE GATE OF MUTIRÃO PROJECT 'PAULO FREIRE' - P.155 (2015)



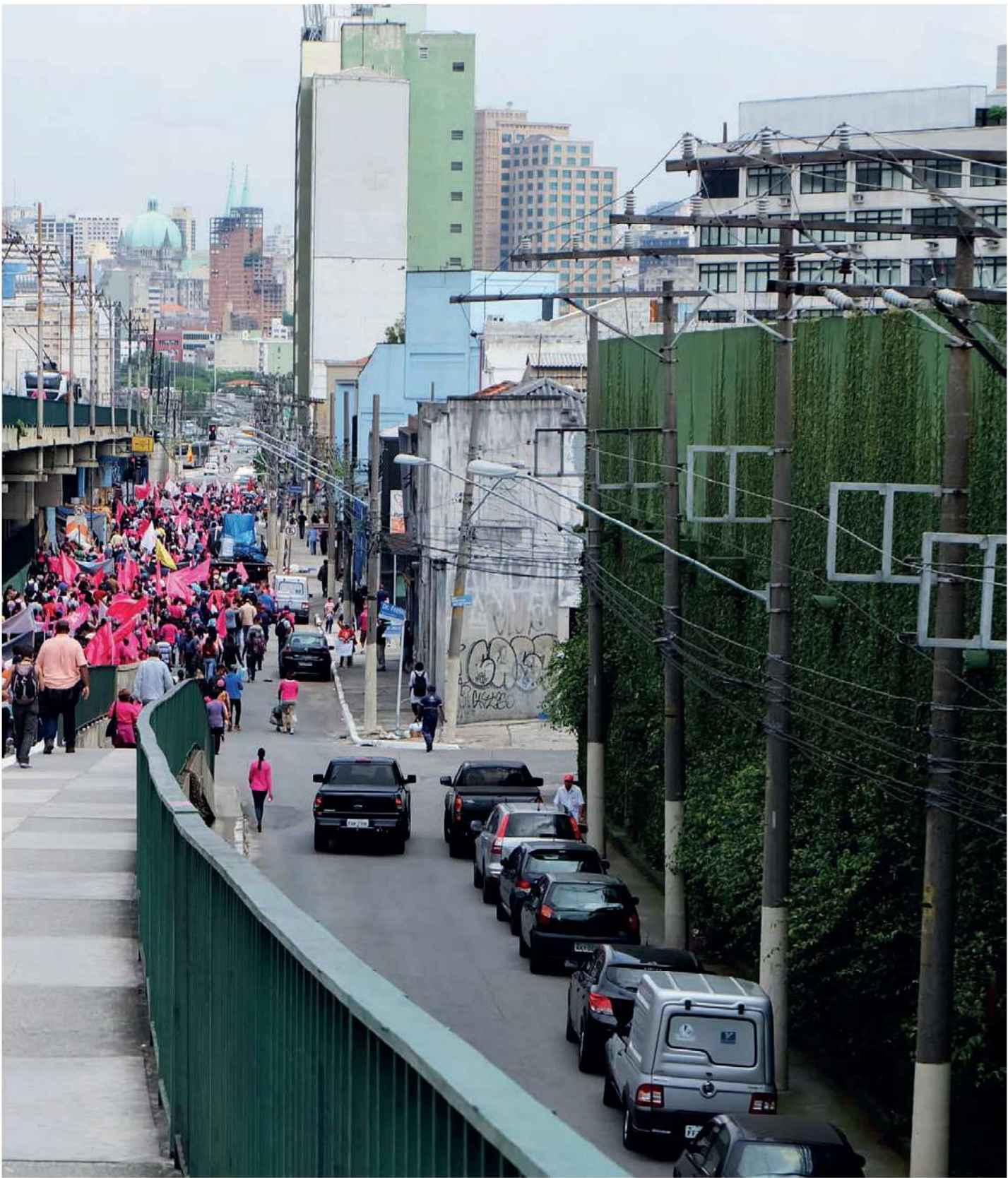


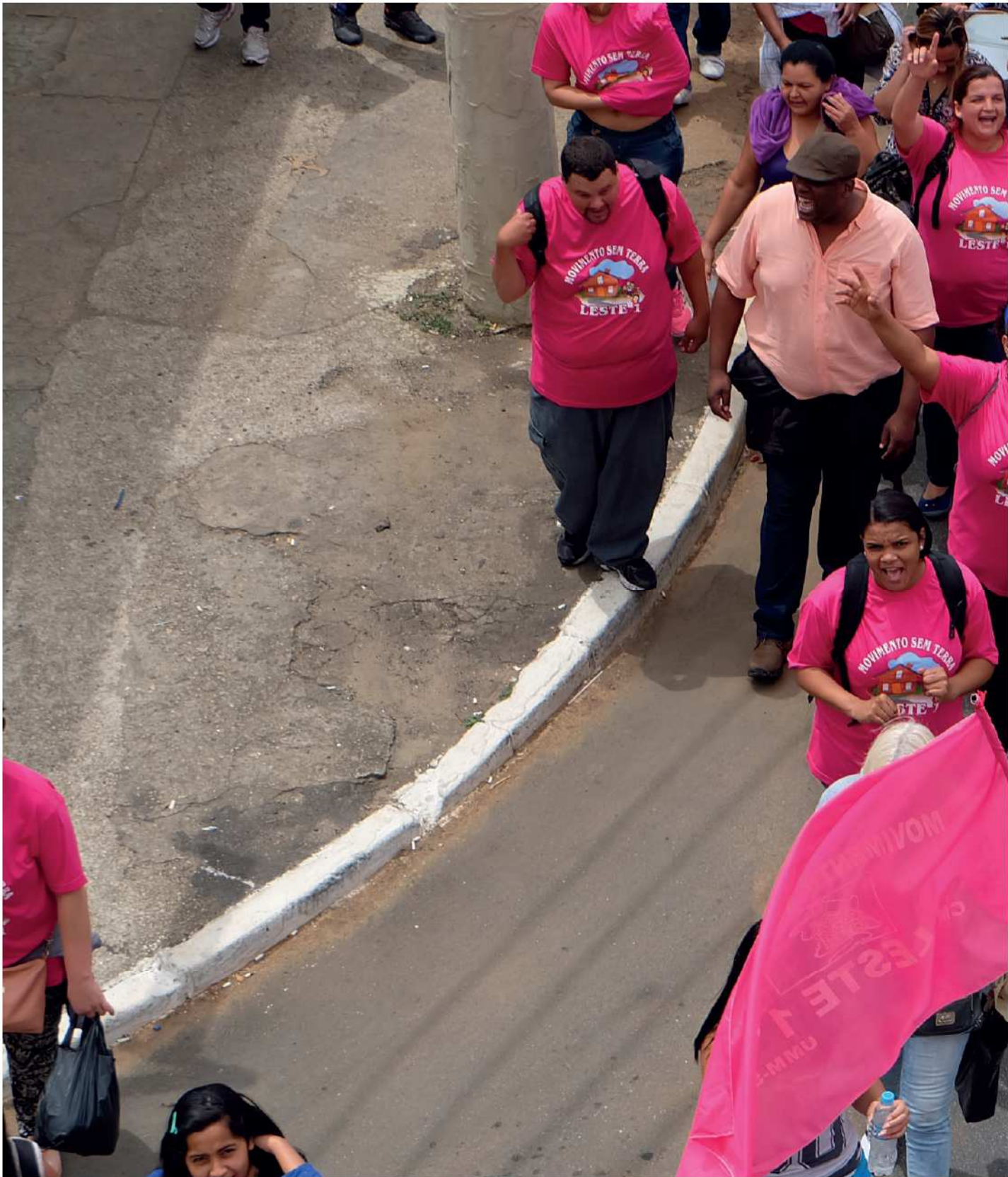
IT WAS FROM THIS SOCIAL DWELLING LOGIC AND LACK OF FUTURE PERSPECTIVE FOR THE LOW-INCOME POPULATION THAT SOCIAL MOVEMENTS EMERGED AND ORGANIZED THEMSELVES IN THE 80'S.
ANNO 2016 MOVEMENTS STILL MANIFESTATING FOR THE RIGHT TO THE CITY AT AVENIDA PAULISTA IN FRONT OF MASP. (2015)





THE MAIN FEATURE OF HOUSING PRODUCTION INTRODUCED BY THESE MOVEMENTS WAS - AND STILL IS - *MUTIRÃO*. *MUTIRÃO* IS A COMMON BRAZILIAN NOTION TO NAME COLLECTIVE MOBILISATIONS AND MUTUAL HELP. THE NOTION EVOLVED FROM A TERM THAT WAS USED TO SPECIFY THE MUTUAL HELP AMONGST FARMERS DURING HARVEST TO A BROAD RANGE OF 'COMMUNAL' PRACTICES, WITH COLLECTIVE BUILDING AS ITS MOST REMARKABLE ARTICULATION. (2015)





MST LESTE 1, IN PINK, IS ONE OF THE MAIN ACTORS IN THE STRUGGLE FOR ENSURING THE RIGHT TO CITY, LAND AND HOUSING LOW-INCOME POPULATION IN THE EAST ZONE OF SÃO PAULO. (2015)





THE ASSOCIATION 'PARQUE SÃO RAFAEL', CREATED OUT OF MEMBERS OF MST LESTE 1, ARE INITIATING A NOVEL MUTIRÃO PROJECT. THE ASSOCIATION IS IN CHARGE OF THE ORGANIZATION AND THE MANAGEMENT OF THE ENTIRE MUTIRÃO PROJECT. UNDER ARCHITECTURAL AND TECHNICAL GUIDANCE OF USINA, THE MUTIRANTES DESIGN COOPERATIVE THEIR FUTURE PROJECT - P.247 (2015)





WITH BLOCKS IN DIFFERENT COLOURS, THE MUTIRANTES CAN START STACKING AND COMPOSING LAYOUTS AND CIRCULATION POSSIBILITIES BETWEEN THE APARTMENTS. THROUGHOUT THE PARTICIPATIVE DESIGN PROCESS, THE PARTICIPANTS BECOME AWARE OF THE FACT THAT NOT ALL THEIR WISHES AND CONFIGURATIONS ARE POSSIBLE - P.247 (2015)





THE THREE 'BRIGADES DE MUTIRANTES' - BLUE, YELLOW AND RED - OF CINCO DE DEZEMBRO IN SUZANO ARE COLLECTIVELY EXCAVATING THE FOUNDATION OF THEIR MUTIRÃO ASPIRATION - P.277 (2015)





AFTER A LONG DAY OF WORKING ON THE CONSTRUCTION SITE, THE MUTIRANTES ARE ONE STEP CLOSER TO THEIR FUTURE HOUSE - P.277 (2015)





MUTIRÃO 'PAULO FREIRE' IN CIDADE TIRADENTES AS A SUCCESSFUL OUTCOME OF THE LONG, EXHAUSTING STRUGGLE - P.155 (2015)



INTRODUCTION

The main aim of this research is to unravel *mutirão* projects and experiences in São Paulo. *Mutirão* is a common Brazilian notion to name collective mobilisations and mutual help. The notion evolved from a term that was used to specify the mutual help amongst farmers during harvest to a broad range of 'communal' practices, with collective building as its most remarkable articulation. The latter meaning of *mutirão* as a distinctive form of communal self-help building with an indissoluble connection to self-management in a context of social housing is the precise topic of this research.

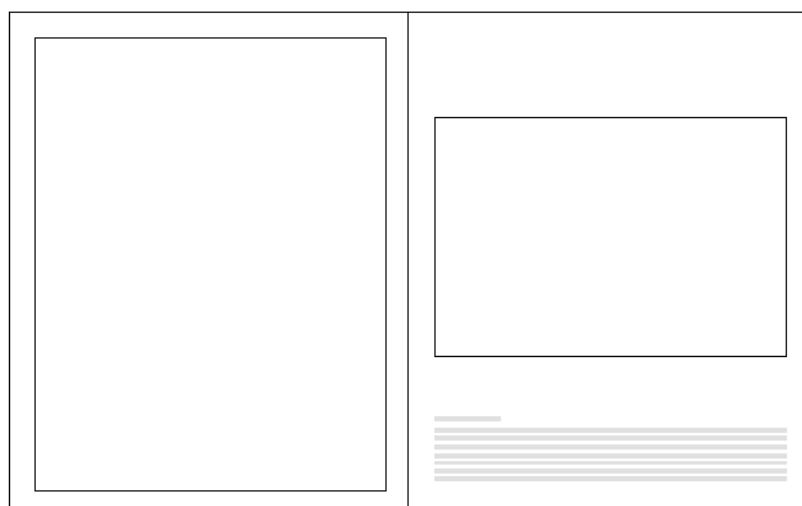
Social housing in São Paulo and specifically in its periphery has gone through a complicated history, in which social movements played a crucial role. During the late 60's and 70's, due to the allurements of work and a better future, an important economic and geographic growth occurred in São Paulo. An uncontrolled urban sprawl caused an expansion of the urbanized area that was neither predicted nor foreseen but resulted in one of the largest metropolises of Latin-America. The city's vast and fast growth was paralleled with an increasing housing deficit. From the 60's onwards, various civil construction offices started benefiting from this growing demand for social housing, building entire monotone neighbourhoods largely lacking infrastructure and services.

It was from this social dwelling logic and lack of future perspective for the low-income population that social movements emerged and organized themselves in the 80's. With the military regime (1964-1985) losing its grip on São Paulo, the movements gained more and more power in the struggle for decent housing. The main feature of housing production introduced by these movements was - and still is - *mutirão*. Urban residents grouped themselves in syndicates and social movements and gradually became new political protagonists. By claiming rights to the city, they helped to establish the democratization of Brazil and the improvement of the public space and infrastructure in the periphery. (Arantes, 2006; Rolnik, 2004)

Mutirão is a relatively unexplored topic in both Portuguese and Anglo-Saxon literature, even social movements, in general, are hardly documented. Hence, this research seeks to make an important contribution in uncovering the historical and contemporary impact of social movements in the production of urban space.



STANDARD LAYOUT FOR BACKGROUND, STORY TELLING AND CRITICAL ANALYSES



LAYOUT OF PROJECT SHEET

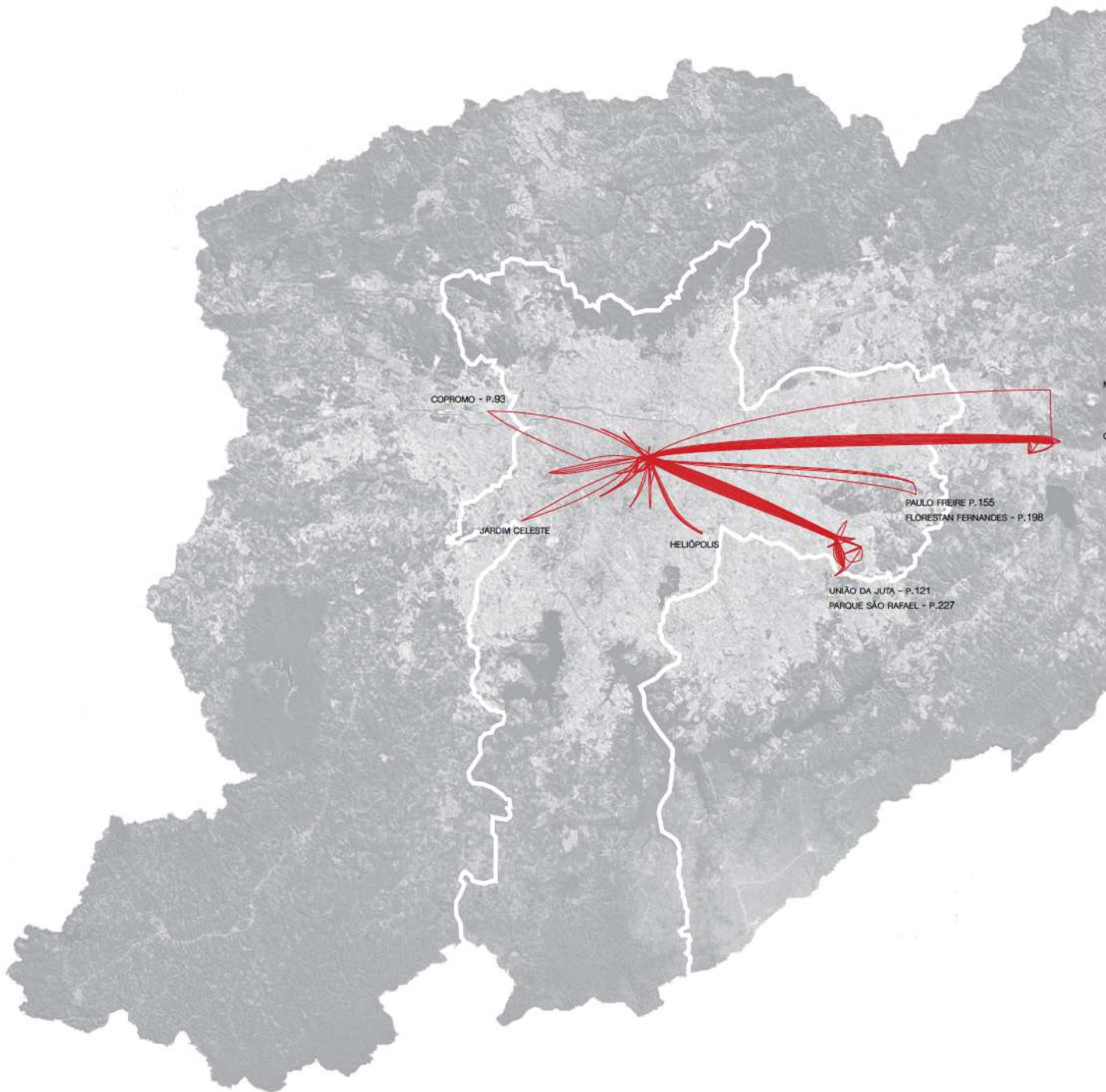
STRUCTURE

The research consists of three main chapters: I. PAST, II. PRESENT and III. FUTURE. As in a trilogy, every chapter can be read as a standalone entity, while at the same time the whole provides an extended chronologic narrative. Through the three parts, a timeline forms the backbone of the story, shifting its focus from (I.) years to (II.) months and days, to (III.) a leap towards the future.

Chapter I. PAST discusses how mutirão emerged and evolved throughout the last decades of the 20th century. Five case studies of mutirão projects in São Paulo's periphery are analysed to unravel the concept of mutirão on the basis of its concrete presence in the city. In a chronological way, it narrates the increasing and increasingly organized struggle of social movements and their housing aspirations. This part aims to unravel the low-income population's struggle for participation and autonomy in the construction of housing. The chapter will document five mutirão projects of the past to learn from them for the future. Each project is analysed in four perspectives; framing the context in which the project emerged, the story behind the project, the project itself and a peculiar specific aspect of the project.

In **Chapter II. PRESENT** the timeline shifts in scale, shedding light on the present condition of mutirão in São Paulo by using two ongoing mutirão projects of Usina, localised in the eastern periphery of São Paulo. The two projects, named Cinco de Dezembro and Parque São Rafael, will form the backbone to explain the different phases of a contemporary mutirão project in depth. They are in distinct phases and thus form the ideal base to gain a more complete notion of mutirão in the present-day situation. This chapter is the result of a close collaboration with Usina and the respective movements.

The evolution of mutirão is significant and mutirão seems to find itself on its tipping point. More and more, this very distinctive way of developing a low-income housing project becomes restricted by rigid and standardized regulations. Meanwhile, also social movements and *assessorias técnicas* increasingly doubt the benefits of complete self-managed and self-constructed projects. In **chapter III. FUTURE**, the project 'Parque São Rafael' will be used as a laboratory to experiment with different future scenarios. Designs will be tested as valuable means to unfold critical reflections on the past and present condition of mutirão as a particular approach to design and construct, as a way to explore new modes of 'doing' mutirão, and as an attempt to actively contribute in the ongoing participatory process carried out by Usina and MST Leste 1. In particular, the design exploration seeks to inform the participatory process with larger urban-scale design scenarios, imagining a social housing production that embraces the agency of social movements while emphasizing the importance of design.



ALL ROUTES TAKEN IN SÃO PAULO AND PERIPHERY DURING FIELDWORK



METHODOLOGY

Because mutirão projects entail a complex, many-faceted and multi-layered interplay of diverse conditions and seizing opportunities, a diverse set of eclectic methods was needed to capture the topic.

First, during August and September 2015, eight weeks (2015/08/18 - 2015/10/08) of fieldwork were conducted as a fundamental way to discover mutirão 'in the field'. To explore the concept of mutirão, this research was made in collaboration with Usina, perhaps the most well-known and respected *assessoria técnica* in São Paulo that supports mutirão projects in an architectural and social way. The intensive collaboration with *assessoria técnica* Usina contributed to the outcome of this research. Usina had the openness, we the courage to engage. By providing full access to the way or working of Usina and making documentation available, Usina enabled in-depth fieldwork, visits to former projects and understanding in mutirões and social movements.

Fieldwork also included interviews, participatory observation, ethnographic documentation, spatial analysis and mapping to grasp the history and present unfolding of mutirões. Further, discourse analysis of urban history, housing studies, and legal documents completed the fieldwork. The research project combines in this way 'bottom up' experiences with 'top down' analyses, confronting historical with contemporary data, combining social and cultural studies with spatial analysis and design.

The importance of fieldwork also stemmed from the relative scarcity of both Portuguese and English literature, necessitating to combine fieldwork material with fragments of relevant literature. Mutirão finds itself on its tipping point nowadays. Seeking to contribute to the available literature on mutirão, mostly departing from a sociological or political approach, this study initiates a radical architectural and urbanism approach, focussing on concrete projects in the city.

This research project on mutirão forms part of the larger research interest of the OSA Research Group on Urbanism & Architecture of the University of Leuven. It is closely related to the ongoing doctoral research of Jeroen Stevens that deals with the agency of popular movements in São Paulo in performing particular instances of urbanism. Fieldwork was conducted in close collaboration with him. Furthermore, this project builds upon four years of successive research theses that were carried out in São Paulo under the coordination of OSA, amongst others, the former research by Lisa De Vos and Carmen Briers 'São Paulo Ocupado' provided fruitful inspiration.

Throughout the following text references to interviews and presentations from the fieldwork are indicated, referring to a separate bibliography. Illustrations are made by the authors unless explicitly referenced otherwise and photographic material is credited when not made by the authors.

ACKNOWLEDGEMENTS

We are especially thankful to Usina, our critical local partner in this project in São Paulo. In particular Danilo Eric dos Santos, Ana Carolina Carmona, Flávio Higuchi Hirao, Gabriel Martins Delduque, Ícaro Vilaça N. Cerqueira, Israel Pacheco Júnior, José Rodolfo Pacheco Thiesen, Kaya Lazarini, Mario Luis Attab Braga, Maiári Cruz Iasi, Sandro Barbosa, Wagner Germano. Without them, we would never have been able to gain all the information necessary for the completion of this research. We want to thank them for the intense and interesting weeks, the chance they offered us to be 'participant observers' in their ongoing projects and their efforts to really take us 'inside' Usina's world. Furthermore, we would like to express our gratitude to MST Leste 1, the movement that engaged in most of the visited projects and took a leading role in our discovery of *mutirão*.

Besides Usina and MST Leste 1, we would like to give special thanks to Jeroen Stevens for proposing the topic of *mutirão*, for the intense readings, discussions, and feedback sessions, for the guidance and collaboration during fieldwork but above all for maintaining the focus. Along with Jeroen Stevens, Bruno De Meulder has been a great support, stimulating the research with fresh insights and new points of view. Moreover, we express our gratitude towards Pedro Arantes for his role as an inexhaustible source of information and for his assistance during fieldwork and afterwards. As well we like to thank Eliana Barbosa for the critical inputs and intense discussions.

Special thanks go to the residents of the visited *mutirão* projects, in particular to the *mutirantes* of 'Cinco de Dezembro' and 'Parque São Rafael' for their hospitality, openness and willingness to invite us into their homes and lives.

Furthermore, we want to express our gratitude towards Nadia Somekh for inviting us to São Paulo, and Benedito Barbosa 'Dito', João Alberto Cantero, Felinto Carlos F. da Cunha, Cristiane Dantas, Maria das Dores 'Dora', Marcella dos Santos Gomes Ferreira, Cristina Oliveira, Manoel Otaviano, José Luiz Rizzo, Janaína Almeida Stédile, Débora Sanches and Débora Ungaretti, who each in their own way provided us with interesting insights concerning *mutirão*.

Last but not least, we thank our family and loved ones for their everlasting support.

STAGE, SCOPE & PROTAGONISTS
ESTÁGIO, O ÂMBITO E OS PROTAGONISTAS



SÃO PAULO
ON THE EDGE OF THE CITY



MST LESTE 1
A PIONEER IN THE STRUGGLE



USINA
A REMARKABLE ASSESSORIA TÉCNICA



MUTIRÃO
COOPERATIVE BUILDING



SOUTH AMERICA

17 840 000 km²
385 742 554 INH
21.4 INH/km²

12 COUNTRIES
4TH BIGGEST CONTINENT
5TH LARGEST IN POPULATION

870 KM





BRAZIL

8 515 877 km²
201 009 622 INH
24 INH/KM²

OCCUPIES 47% OF SOUTH AMERICA
26 STATES
INDEPENDENT SINCE 1822

500 KM





SÃO PAULO STATE

248 223 km²

41 262 199 INH

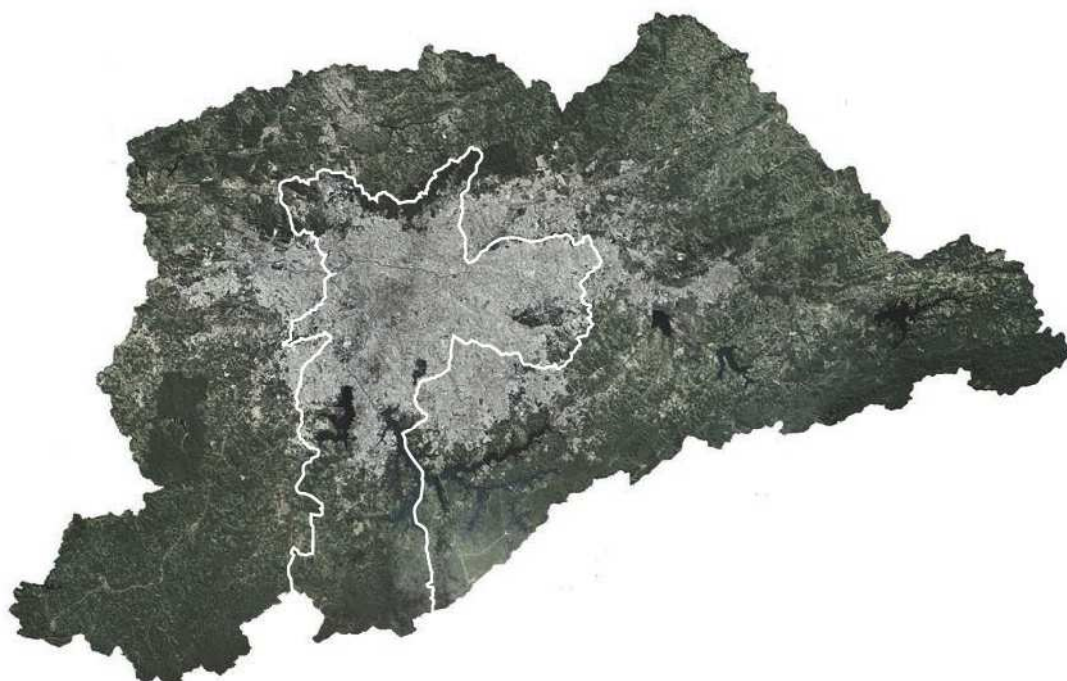
166 INH/KM²

12TH BIGGEST STATE

15 MESOREGIOS

200 KM





SÃO PAULO METROPOLE (RMSP)

8 051 km²
19 220 000 INH
2 387 INH/km²

10TH BIGGEST METROPOLITAN AREA IN THE WORLD

20 KM



SÃO PAULO

FOUNDED IN 1554

SOUTH LATITUDE 23°33' | WEST LONGITUDE: 46°38' | ALTITUDE 760M

70 KILOMETRES FROM THE ATLANTIC OCEAN

1 523 KM² | 11 967 893 INH. | 7 762 INH/KM²

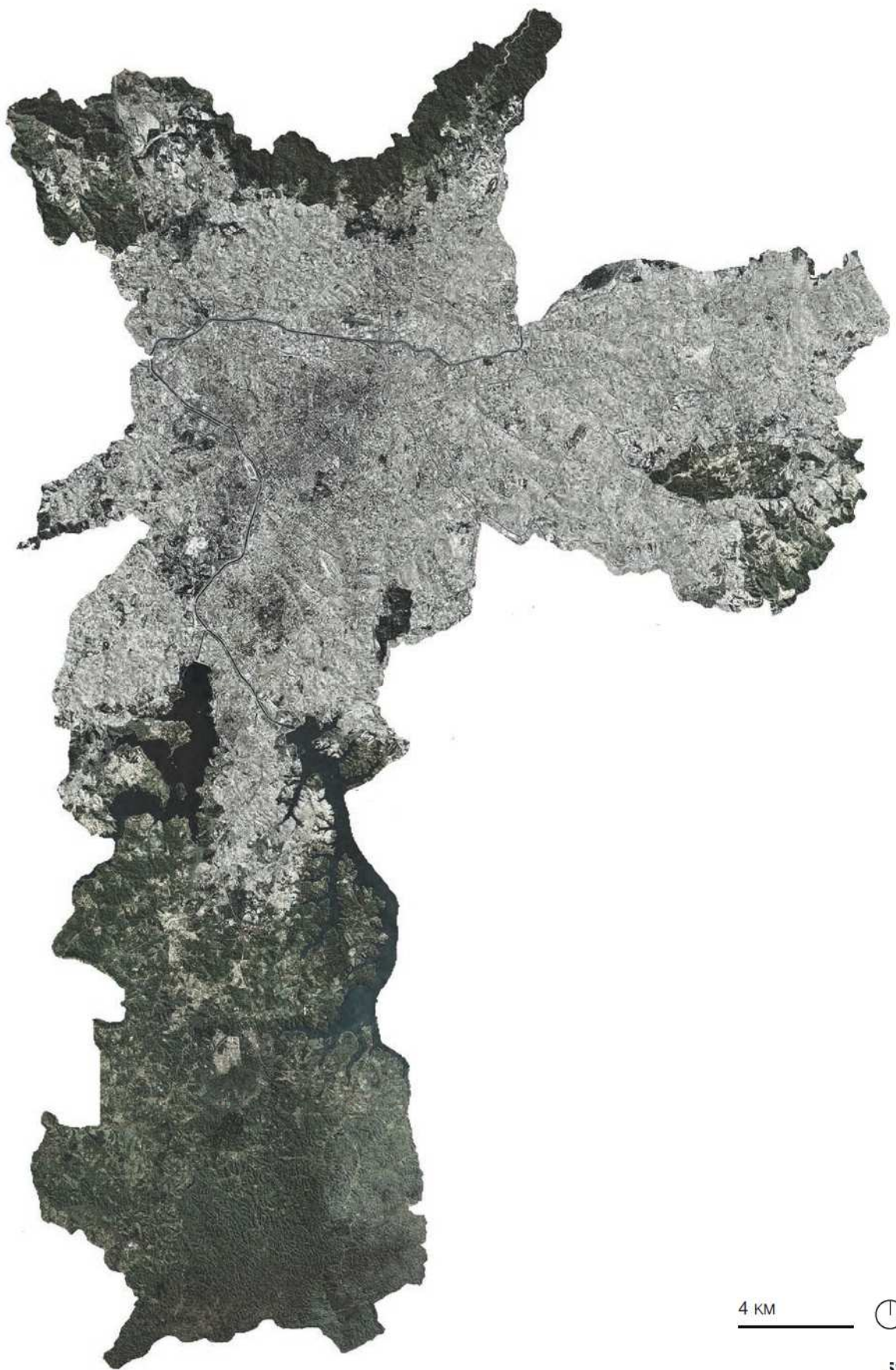
MONSOON-INFLUENCED HUMID SUBTROPICAL CLIMATE

SUMMER: 17°C - 28°C | WINTER: 11°C - 23°C

ANNUALLY RAINFALL: 1 454 MILLIMETRES

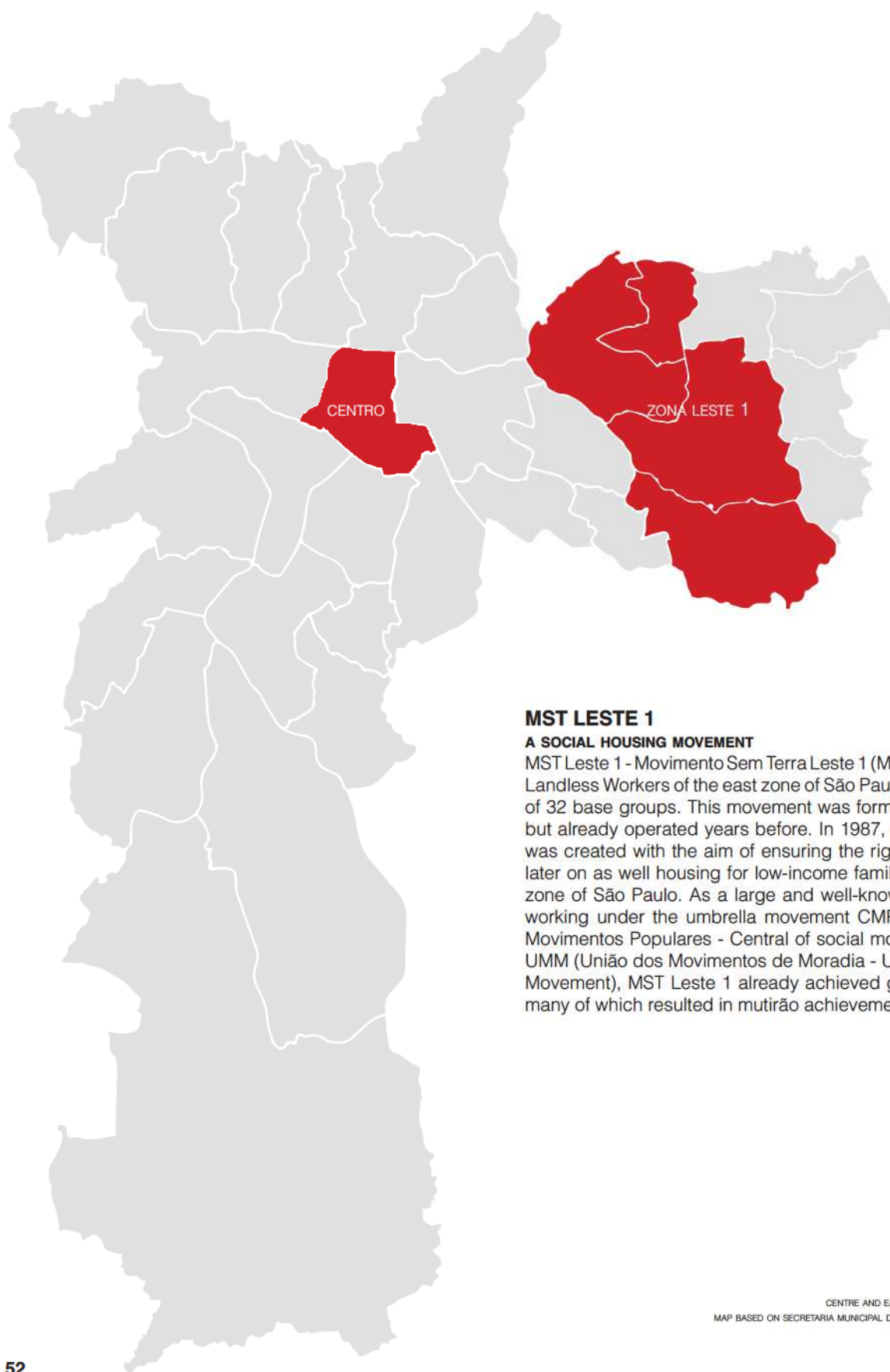
TIME ZONE: UTC -3

31 SUBPREFEITURAS



4 KM



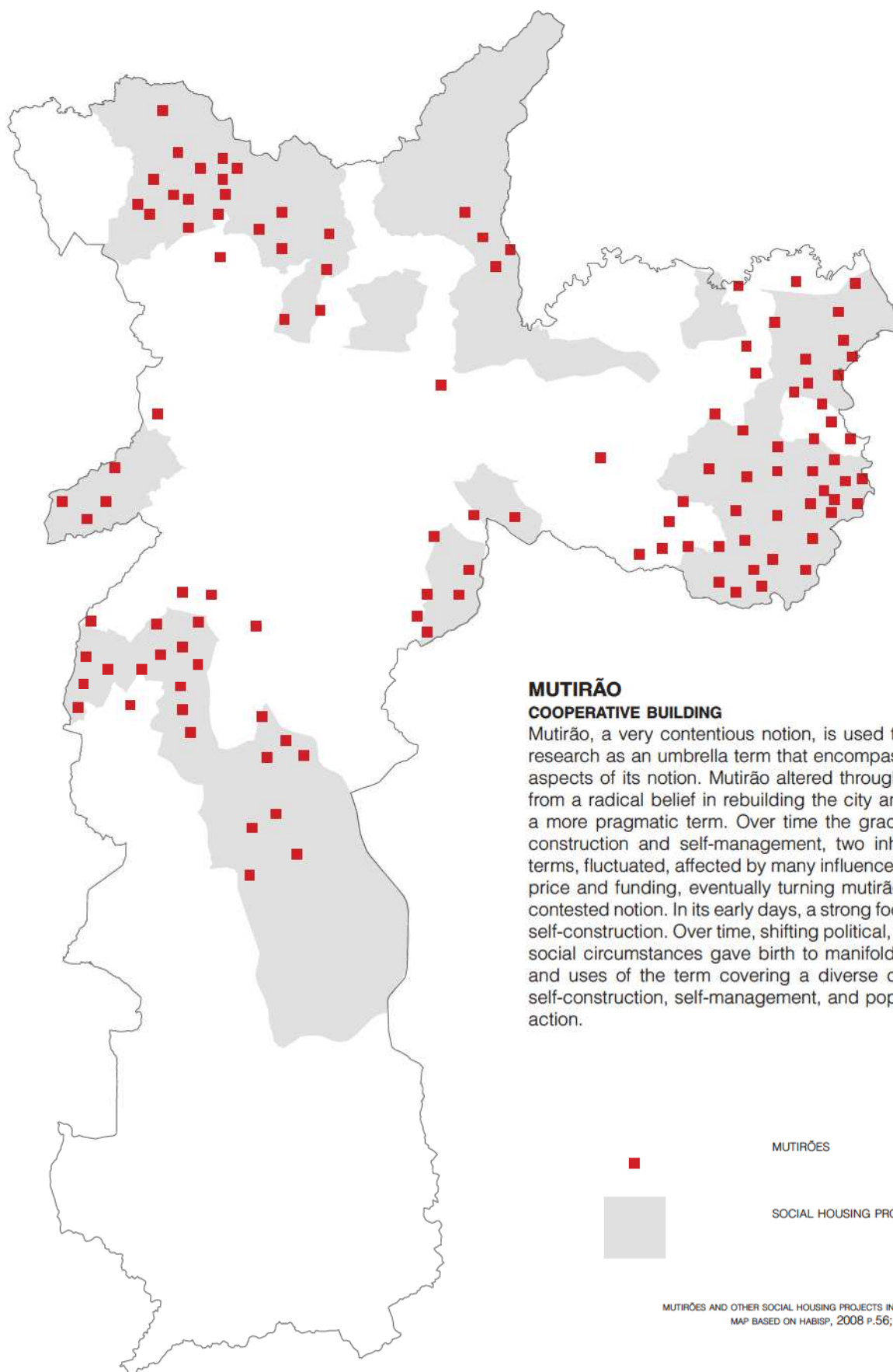


MST LESTE 1

A SOCIAL HOUSING MOVEMENT

MST Leste 1 - Movimento Sem Terra Leste 1 (Movement of the Landless Workers of the east zone of São Paulo) is compiled of 32 base groups. This movement was formalized in 2003 but already operated years before. In 1987, the movement was created with the aim of ensuring the right to land and later on as well housing for low-income families in the east zone of São Paulo. As a large and well-known movement, working under the umbrella movement CMP (Central dos Movimentos Populares - Central of social movements) and UMM (União dos Movimentos de Moradia - United Housing Movement), MST Leste 1 already achieved great victories, many of which resulted in mutirão achievements.

CENTRE AND EAST ZONE 1 OF SÃO PAULO
MAP BASED ON SECRETARIA MUNICIPAL DO PLANEJAMENTO URBANO



USINA

A REMARKABLE ASSESSORIA TÉCNICA

A *mutirão* project is always conducted in close collaboration with After the institutionalizing of *Funaps-Comunitário* (p. 58), São Paulo officially counted 26 *assessorias técnicas*. These 'technical support' offices offer architectural and technical support for the design and construction of cooperative popular building projects. As a consequence of the altering political and cultural landscape in São Paulo, and as a result of diminishing governmental support, several *assessorias técnicas* turned over the years into private and more conventional architectural offices. Nowadays, only three *assessorias técnicas* are persisting in São Paulo. Among them, Usina.

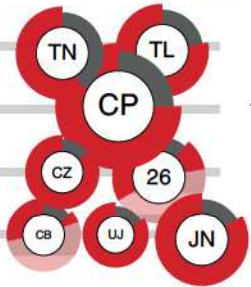
Usina was founded in June 1990 by professionals from various fields of expertise. The group's challenge was and still is to progressively develop projects and technologies that can be imagined, developed and implemented by future inhabitants themselves whilst striving to create more qualitative and collectively designed and built social housing projects for the lowest income groups of the city.

Usina has participated in the design and execution of more than 5,000 housing units, as well as community centres, schools, and kindergartens in cities and rural settlements, especially in the state of São Paulo. They also engaged in the development of urban planning and slum upgrading projects and assisted the formation and organization of labour unions (Usina, 2014).



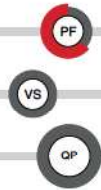
25 YEAR EXISTENCE OF USINA (1990-2015)

CARTOGRAPHY OF USINA'S MUTIRÕES | CARTOGRAFIA MUTIRÕES DA USINA

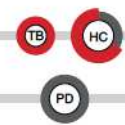


1990

1995



2000



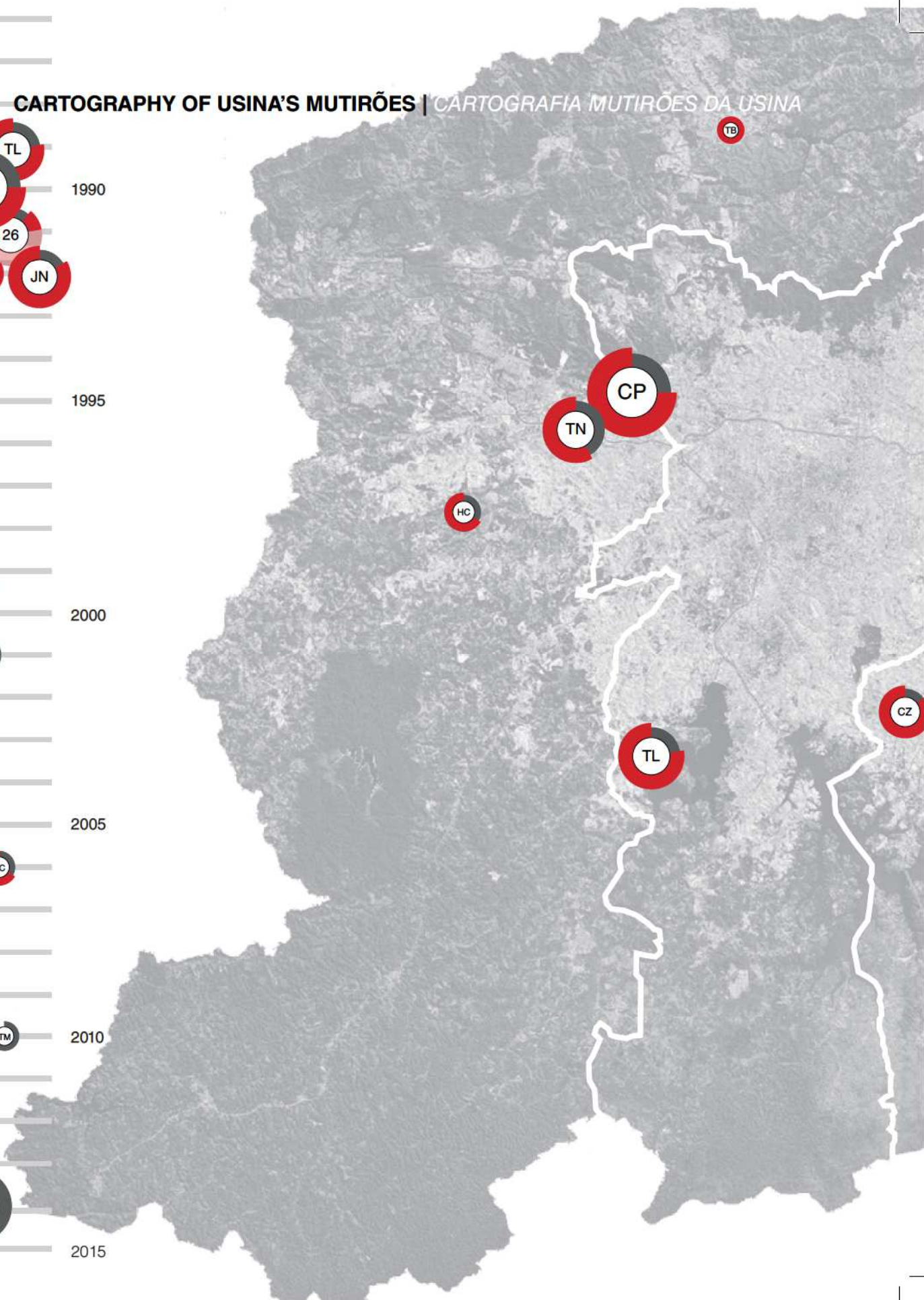
2005



2010



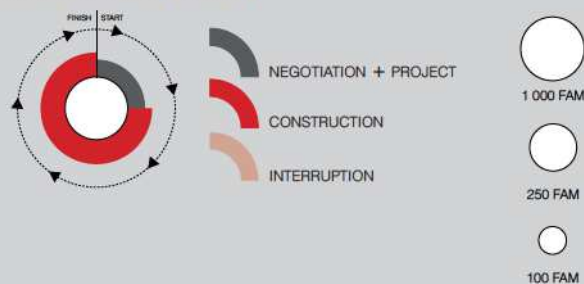
2015



PROJECT LIST

- 
TN TERRA É NOSSA
 1989-1993 | 520 FAM | OSASCO - JARDIM PIRATININGA
- 
CZ CAZUZA
 1990-1993 | 80 FAM | DIADEMA - JARDIM GAZUZA
- 
26 26 DE JULHO
 1991-2000 | 561 FAM | SÃO MATEUS - FAZENDA DA JUTA
- 
TL TALARA
 1989-1998 | 408 FAM | GUARAPIRANGA
- 
CP COPROMO
 1990-1999 | 1000 FAM | OSASCO - ALIANÇA
- 
CB CASA BRANCA
 1992-1999 | 200 FAM | GUAIANAZES - JARDIM DOS PEREIRAS
- 
UJ UNIÃO DA JUTA
 1992-1998 | 160 FAM | SÃO MATEUS - FAZENDA DA JUTA
- 
JN JUTA NOVA ESPERANÇA
 1992-1999 | 512 FAM | SÃO MATEUS - FAZENDA DA JUTA
- 
PF PAULO FREIRE
 1998-2010 | 100 FAM | CIDADE TIRADENTES - INACIO MONTEIRO
- 
VS VILA SIMONE
 2006-2008 | 120 FAM | GUAIANAZES
- 
TB COMUNA TOMAS BALDUINO
 2006-2012 | 61 FAM | FRANCO DA ROCHA
- 
HC DOM HÉLDER CÂMARA
 2008-2010 | 128 FAM | JANDIRA
- 
5D CINCO DE DEZEMBRO
 2010-TODAY | 56 FAM | SUZANO - JARDIM NAZARETH
- 
TM TÂNIA MARIA
 2010-TODAY | 88 FAM | SUZANO - JARDIM NAZARETH
- 
SR PARQUE SÃO RAFAEL
 2014-TODAY | 700 FAM | SÃO MATHEUS - PARQUE SÃO RAFAEL

DISTRIBUTION AND CAPACITY



ARENA	Aliança Renovadora Nacional (National Renewal Alliance)
BNH	Banco Nacional da Habitação (National Housing Bank)
CDHU	Companhia de Desenvolvimento Habitacional e Urbano do Estado de São Paulo (Housing and Urban Development Company of the State of São Paulo)
CEF	Caixa Econômica Federal
CEU	Centro Educacional Unificado (Unified educational centre, public school)
CMP	Central dos Movimentos Populares (Central of social movements)
COHAB-SP	Companhia Metropolitana de Habitação de São Paulo (Metropolitan Housing Company of São Paulo)
CONAM	Confederação Nacional das Associações de Moradores (National Confederation of Housing Associations)
CUT	Central Unica dos Trabalhadores (National trade union centre in Brazil)
FGTS	Fundo de Garantia de Tempo Serviço
FUCVAM	Federación Uruguay de Cooperativas de Ayuda Mutua
FUNAPS	Fundo de Atendimento à População moradora em habitações Subnormais (Funding Programme for People in Subnormal living conditions)
HIS	Habitação Interesse Social (Habitation of Social Interest)
Minimum wage	Minimum income, used as indication to divide the lowest income population into three categories. The category on bottom, range 1, includes the families with income from 0 to 3 times the minimum wage (Family income: until R\$2.172). Range 2 includes the families from from 3 to 6 (Family income: between R\$2.172 and R\$4.344) and range 3 from from 6 to 10 times the minimum wage (Family income between R\$4.344 and R\$7.240).
MST	Movimento dos Trabalhadores rurais Sem Terra (Movement of the Workers Without Land)
MST LESTE 1	Movimento dos Trabalhadores Sem Terra de zona Leste 1 (Movement of the Landless Workers in East zone 1 of São Paulo)
MTST	Movimentos dos Trabalhadores Sem Teto (Movement of the Roofless Workers)

GLOSSARY | GLOSSÁRIO

PDS	Partido Democrático Social (Democratic Social Party)
PFL	Partido da Frente Liberal (Liberal Front Party)
PM/UMM	Programa Mutirão (Mutirão Programme)
PMDB	Partido do Movimentos Democrático do Brasileiro (Brazilian Democratic Movement Party)
PMCMV	Programa Minha Casa Minha Vida
PMDB	Partido do Movimento Democrático Brasileiro (Brazilian Democratic Movement)
PMH	Programa Municipal de Habitação (Municipal Programme of Housing)
PMSP	Prefeitura do Município de São Paulo (Government of the City of São Paulo)
PP	Partido Progressista (Progressive Party)
PPB	Partido Progressista Brasileiro (Brazilian Progressive Party)
PPM	Programa Paulista de Mutirão e autogestão
PRN	Partido da Reconstrução Nacional (National Reconstruction Party)
PRÓ-SBC	Progresso São Bernardo do Campo
PSD	Partido Social Democrático (Social Democratic Party)
PSDB	Partido da Social Democracia Brasileira (Brazilian Social Democracy Party)
PT	Partido dos Trabalhadores (Workers' Party)
PTB	Partido Trabalhista Brasileiro (Brazilian Labour Party)
RMSP	Região Metropolitana de São Paulo (São Paulo Metropolitan Region)
SEHAB	Secretaria Municipal de Habitação (São Paulo Municipal Housing Secretariat)
UMM	União dos Movimentos de Moradia (United Housing Movement)
ZEIS	Zonas Especiais de Interesse Social (Zones of Special Social Interest)

PORTUGUESE TERMS | *TERMOS PORTUGUESES*

Assembléia	Reunion, assembly
Assessoria técnica	Non-governmental organisation of architects, urbanists and social workers that offers movements support by providing technical assistance
Autogestão	Self-management
Bairro	Neighbourhood
Canteiro	Construction site
Favelados	Inhabitants of a shanty towns or ' <i>favela</i> '.
Mutirão	Collective autoconstruction
Mutirantes	Commonly used for future residents who work in low-income housing construction of Mutirões.
Nordestino	Person who originates from the northeast of Brazil
Portaria	Gatekeeper, commonly in gated communities
Vila	Portuguese term that is used to define a workers' district outside of the city centre



PAST PASSADO

THE HISTORY OF MUTIRÃO | *A HISTORÍA DE MUTIRÃO*
[1985-2015]

The history of mutirão is very complex and its historical development has been influenced by myriad events and dynamics. In this chapter, five key mutirão projects are discussed to gain insight into crucial shifts in the particular history of mutirão in São Paulo's urban development.

1970

1975

1980

1985

1990



MUNICIPALITY SÃO PAULO

FERRAZ COLASUONNO [ARENA] OLAVO SETÚBAL [ARENA] DE BARROS [PDS] CURIATI [PDS] MÁRIO COVAS [PMDB] JÂNIO QUADROS [PTB] LUIZA ERUNDINA [PT]



STATE SÃO PAULO

LAUDO NATEL [ARENA] MARTINS [ARENA] PAULO MALUF [ARENA] MARIN [PDS] MONTORO [PMDB] ORESTES QUÉRCIA [PMDB]



BRAZIL

EMÍLIO MÉDICI [ARENA] ERNESTO GEISEL [ARENA] JOÃO FIGUEIREDO [PDS] JOSÉ SARNEY [PMDB] COLLOR [PRN] ITAMAR FRANCO [PMDB]

INDUSTRIAL STRIKES

RISE OF SOCIAL MOVEMENTS

FOUNDATION PARTIDO DOS TRABALHADORES

END MILITARY REGIME

CONSTITUTION OF BRAZIL

VILA COMUNITÁRIA [1983]
THE FIRST MUTIRÃO EXPERIMENT (P. 71)
A PRIMEIRA EXPERIÊNCIA MUTIRÃO

SELF-CONSTRUCTION, FC
AUTOCONSTRUÇÃO

FUNAPS COMUNITÁRIA

FOUNDATION UMM
UNIÃO
PMH

FOUNDATION USINA
USINA
FED. MULHERES PAULISTAS
PROGRAMA MUTIRÃO

SÃO PAULO - URBAN AREA POPULATION
MILLIONS

12
10
8
6
4
2

SÃO PAULO CENTRE

SÃO PAULO PERIPHERY

DEBT CRISIS

ECONOMICAL CRISIS

1995

2000

2005

2010

2015

COPROMO [1990]CONSOLIDATING MUTIRÃO (P. 93)
CONSOLIDAR MUTIRÃO**UNIÃO DA JUTA [1992]**TION, FOR BETTER OR WORSE (P. 121)
AUTOCONSTRUÇÃO, PARA MELHOR OU PIOR

CINGAPURA

PLANO DIRETOR

PAULO FREIRE [1999]REVITALIZING MUTIRÃO (P. 155)
REVITALIZAR MUTIRÃO**FLORESTAN FERNANDES AND JOSÉ MARIA AMARAL [2005]**MUTIRÃO ON ITS TIPPING POINT (P. 191)
MUTIRÃO NO SEU PONTO DE INFLEXÃOPLANO DIRETOR
REVISEDMINHA CASA MINHA VIDA - ENTIDADES
FUNDO MUNICIPAL DE HABITAÇÃO

PAULO MALUF [PDS]

CELSO PITTA [PPB]

MARTA SUPPLY [PT]

SERRA
[PSDB]

GILBERTO KASSAB [PSD]

FERNANDO HADDAD [PT]

N USINA

ERES PAULISTAS

AMA MUTIRÃO - UMM

PPM - FASE 1

PPM - FASE 2

PRÓ-LAR MUTIRÃO ASSOCIATIVO

PROGRAMA DE GESTÃO COMPARTILHADA

MINHA CASA MINHA VIDA - ENTIDADES

FILHO [PMDB]

MÁRIO COVAS [PSDB]

GERALDO ALCKMIN [PSDB]

LEMO
[PFL]

JOSÉ SERRA [PSDB]

GOLDMAN
[PSDB]

GERALDO ALCKMIN [PSDB]

CITY STATUTE

CRÉDITO SOLIDÁRIO

MINHA CASA MINHA VIDA - ENTIDADES

TAMAR FRANCO [PMDB]

FERNANDO HENRIQUE CARDOSO [PSDB]

LUIS INÁCIO DA SILVA (LULA) [PT]

DILMA ROUSSEFF [PT]

PLANO REAL

ECONOMICAL
CRISIS

WORLD CRISIS

GDP - GROSS DOMESTIC PRODUCT
USD BILLION

500

1000

1500

2000

2500

3000



VC VILA COMUNITÁRIA [1982 - 1987]
50 FAMILIES | SÃO BERNARDO DO CAMPO

P.71



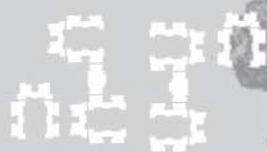
CP COPROMO [1990 - 1999]
1000 FAMILIES | OSASCO - ALIANÇA

P.93



UJ UNIÃO DA JUTA [1992 - 1999]
160 FAMILIES | SÃO MATEUS - FAZENDA DA JUTA

P.121



PF PAULO FREIRE [1998 - 2010]
100 FAM | CIDADE TIRADENTES - INACIO MONTEIRO

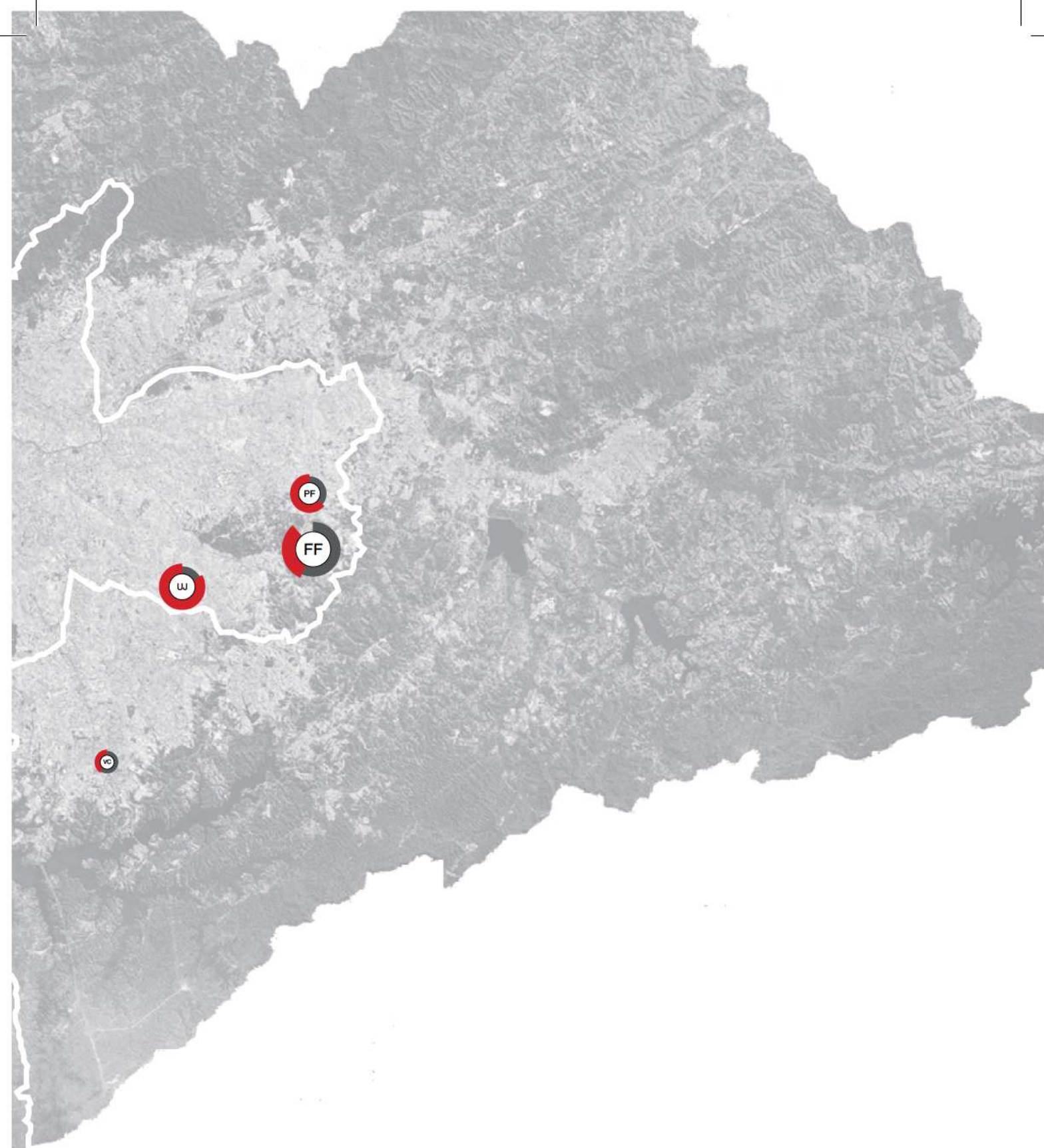
P.155



FF FLORESTAN FERNANDES [2010 - ...]
396 FAM | CIDADE TIRADENTES - INACIO MONTEIRO

P.191







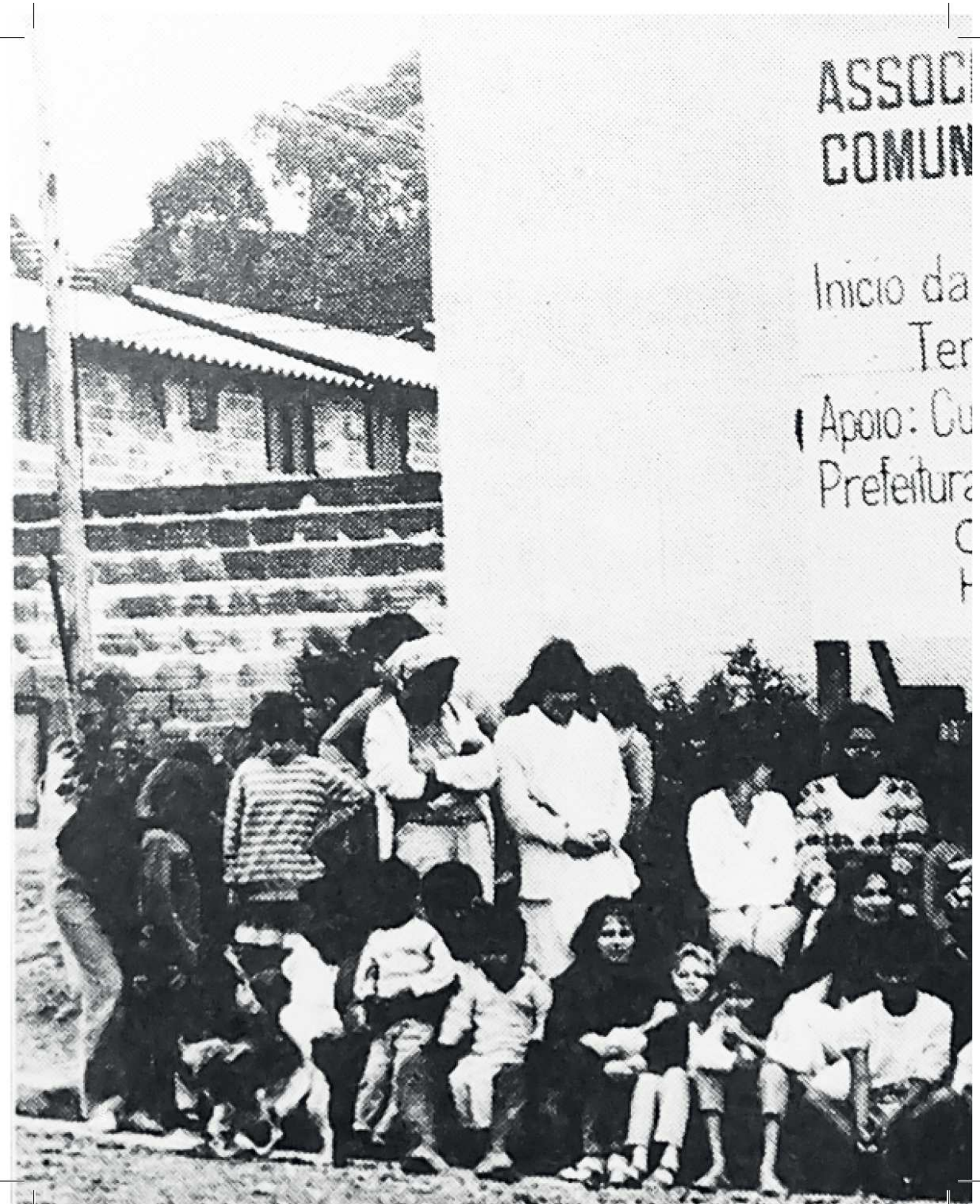
VILA COMUNITÁRIA [1983]

THE FIRST MUTIRÃO EXPERIMENT | *A PRIMEIRA EXPERIÊNCIA MUTIRÃO*

ASSOCI
COMUN

Início da
Ter

Apoio: Cu
Prefeitura



ASSOCIAÇÃO DE CONSTRUÇÃO UNITÁRIA POR MUTIRÃO

da Obra - 14 de Junho de 1985
Termino - 4 de Abril de 1987

Curia Diocesana de Santo André
Município de S. Bernardo do Campo
CDH - Companhia de Desenvolvimento
Habitacional e Entidades



1970

1975

1980

1985

1990

VILA COMUNITÁRIA [1983]

THE FIRST MUTIRÃO EXPERIMENT
A PRIMEIRA EXPERIÊNCIA MUTIRÃO

MUNICIPALITY SÃO PAULO

COLASUONNO
[ARENA]

OLAVO SETÚBAL [ARENA]

DE BARROS [PDS]

CURIATI
[PDS]

MÁRIO COVAS [PMDB]

JÂNIO QUADROS [PTB]

LUIZA ERUNDINA [PT]

STATE SÃO PAULO

INDUSTRIAL
STRIKESFOUNDATION
UMM

UNIÃO

PMH

MARTINS [ARENA]

PAULO MALUF [ARENA]

MARIN
[PDS]

MONTORO [PMDB]

ORESTES QUÉRCIA [PMDB]

BRAZIL

RISE OF SOCIAL
MOVEMENTSFOUNDATION PARTIDO
DOS TRABALHADORESEND MILITARY
REGIME

ERNESTO GEISEL [ARENA]

JOÃO FIGUEIREDO [PDS]

JOSÉ SARNEY [PMDB]

COLLOR [PRN]

SÃO PAULO - URBAN AREA POPULATION
MILLIONS

SÃO PAULO CENTRE

SÃO PAULO PERIPHERY

GDP - GROSS DOMESTIC PRODUCT
USD BILLION

DEBT CRISIS

ECONOMICAL
CRISIS

THE POST-MILITARY MOMENTUM | O IMPULSO PÓS-MILITAR

Due to the historical context in the 1970s and 1980s, the possibility rose up to construct an alternative society capable of producing their own decent housing with the support of social movements and the Vila Comunitária embodies one of the first manifestations of the *mutirão* approach in Brazil. (Fieldwork: Barbosa, 2015)

BURSTING INDUSTRY AND POPULATION

In the 60's, Brazil rapidly industrialized and São Paulo in particular built up an enormous economic capacity. These industries evolved hand in hand with a remarkable demographic growth. Brazilians and immigrants were attracted to São Paulo for its work possibilities in the industrial sector, resulting in a more than doubled population between 1970 and 1990 (Goldsmith, 1994). Because the city's labour class population was rapidly growing, affordable housing became broadly lacking. Large groups of the urban population were forced to move to the city's distanced peripheries and precarious housing conditions arose due to urban spoliation. Capital accumulation was guaranteed by state investments while the provision of basic needs was extremely lacking in the crowded suburbs (Kowarick, 1989). Meanwhile, many families of the working class barely made ends meet. They had to work long hours and were poorly paid while working conditions were often dangerous and unhealthy. São Paulo's fast urbanization sparked contradictions, as wealth and poverty grew in parallel (Fieldwork: Barbosa, 2015; Abramo, 1989).

RESISTANCE

Neighbourhoods and industrial workers grouped together to reveal their struggles against the working and housing conditions. This syndicalism emerged in a dictatorial context in which it was repressed and prohibited by the authorities of the military regime (1964-1984). Only after a long time, they could finally break through (Fieldwork: Arantes, 2016). Street manifestations, strikes, protests and work interruptions were their ways to express their distrust and demand for dignified working and housing conditions. In fact, peripheral residents defended their right to decent housing while exploited factory workers were concerned about their working conditions and wages. These two struggles grew side by side and supported each other.

As such, workplace and household were connected (Goldsmith, 1994; Kowarick, 1989).

MOVEMENTS IN THE ABCD REGION

The Vila Comunitária project is located in São Bernardo do Campo, one of the 38 municipalities that surround the Municipality of São Paulo and constitute the metropolitan region of São Paulo. São Bernardo do Campo is known as a member of the major industrial ABCD region, consisting of Santo André, São Bernardo do Campo, São Caetano do Sul and Diadema. The region's industrial development was mainly related to automotive and metal industry, which largely attracted labour populations due to the surge in employment. The ABCD region became the hub of the economic and industrial revolution of São Paulo (Abramo, 1989; Bava, 1989). Inhabitants of São Bernardo do Campo typically live in *vilas*, a commonly used term for workers' district outside of the city centre.

Even though the Brazilian economy grew rapidly, the working class suffered exploitation and deterioration of living and working conditions. Productivity increased while wages remained unchanged. The awareness of humiliation and injustice of the metal workers in São Bernardo do Campo stimulated the foundation of several syndicates and social movements fighting for better working conditions, higher wages and better management of production. They frequently organized strikes and manifestations to express their existence and to defend their rights. Although they were proud of being employed in the country's most up-to-date plants, they also demanded dignity and respect for their work (Abramo, 1989). Altogether these social movements formed at the beginning of the 80's the *Sindicato dos Metalúrgicos do ABC*, which was often seen as one of the most important moments in the rise of social movements in Brazil. São Bernardo do campo was considered the capital of social conflict in Brazil and the epicentre of the first movement organization. Their strikes received immediately an enormous popular support and spread out to other neighbourhoods. This way, they could pressurize the authorities, demanding facilities and provisions for their dissatisfactions. (Bava, 1989)



MANIFESTATION AGAINST THE DICTATURE OF THE MILITARY REGIME (SOURCE: EBC)



FOUNDATION OF THE WORKERS' PARTY

Social movements grew quickly and a considerable part of the population was involved. Besides the workers' class, movements and syndicates also embraced other domains such as city workers, landless people, women and black people. However, social movements were not politically organized and tend to act locally while only within the political realm, expansion of citizens' rights was possible. In addition to the various domains of social movements, the Workers' Party PT, *Partido dos Trabalhadores*, was able to support them and achieve political influence. In fact, PT is a national mass party comprising social movements, the Brazilian progressive Catholic church, professors, students, people against the military regime and syndicates of several categories. In brief, PT gathered left-wing people that had no voice within the dictatorship (Fieldwork: Arantes, 2016).

In 1979, the military regime established political reform that allowed other parties to participate besides ARENA, *Aliança Renovadora Nacional* (p. 58). That was the time the PT could develop its policy and in February 1980, PT was officially created. Their objective was to create a socialist society in which the workers' class gained importance. Compared to any other Brazilian political party, the PT was remarkably more interested in input from its rank and file. Their ideas and different approach raised the PT to one of the biggest left-wing parties in Latin America (Kowarick & Singer, 1989).

REDEMOCRATIZATION

The rise of social movements and syndicates, the foundation of PT and other parties besides ARENA (p. 58), the importance of the worker's class and a global financial crisis were all factors that led in 1985 to a turning point of the political system from military dictatorship to democracy. Indirect elections of a civilian president were organized by the military government in order to control the shift towards democracy. Tancredo Neves of the PMDB party, *Partido do Movimento Democrático Brasileiro* (p. 58), was elected in 1985 and would become the first civilian president since the beginning of the dictatorship in 1964. However, he died due to illness before taking office. Vice-president, José Sarney, took over his presidency and a new period, named the New Republic, was announced. (Fieldwork: Arantes, 2016; Álvarez-Rivera, 2006)

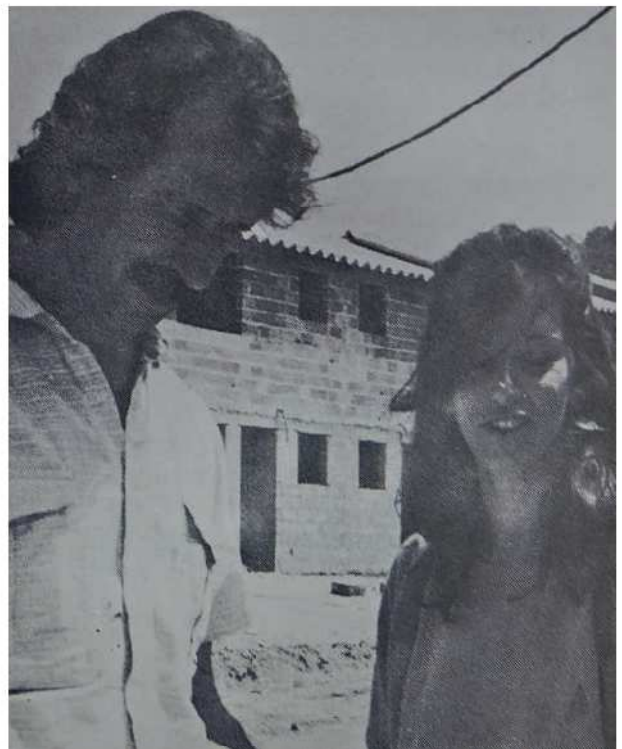


"NÃO QUEREMOS GUERRA, QUEREMOS TERRA." - WE DON'T WANT WAR, WE WANT LAND. (SOURCE: P. ARANTES, 2016)



FOUNDATION OF THE HOUSING MOVEMENT'S UNION

Social movements rose up on several domains, acting on different scales. Some of them gathered large crowds while others remained rather small. To gain more voice and political power, most of these social movements united in federal confederations, of which the four most important are the UNMP (*União Nacional dos Movimentos pro Moradio Popular*), CMP (*Central de Movimentos Populares*), CONAM (*Confederação Nacional dos Associações da Moradia*) and MNLM (*Movimento Nacional de Luta por Moradia*). They all act together in one system called FNRU (*Fórum Nacional da Reforma Urbana*). In São Paulo, the Housing Movement's union, UMM (*União dos Movimentos de Moradia*) was founded in 1987 and represented in fact the federal UNMP (p. 58). It focused mainly on housing, urban transformation, *autogestão*, and *mutirão*. In addition, some social movements remarkably grew to a federal level such as MTST (p. 58), acting in cities, and MST (p. 58), dealing with rural areas (UMM - website; Fieldwork: Barbosa, 2015; Fieldwork: Arantes, 2016).



THE COMMUNITY OF VILA COMUNITÁRIA DURING THE CONSTRUCTION WORKS (SOURCE: VAZ, A.)

MUTIRÃO ENTERING THE SCENE | *MUTIRÃO ENTRANDO EM CENA*

Emerging in this historical context, Vila Comunitária is often considered one of the very first mutirão projects in São Paulo (Fieldwork: Arantes, 2016; Fieldwork: Barbosa, 2015). Everybody that engaged in the beginning of the mutirão Vila Comunitária was already involved in a fight for 'o Sacoão' (literally: 'the bag'), a place of gathering and community-based affordable market managed by low-income inhabitants of the area. Despite the higher social classes their overall disbelief in the grassroots project, the Sacoão became a symbolic place for the poor to proof their agency in self-management and self-steered improvement (Vaz, 1988). Out of necessity, those living in precarious conditions, trying to survive with the little sources available, started to mutually support one another, and out of those fundamental needs grew a distinctive community. The success of the self-supported market eventually also encouraged to embark on a communal building project. To initiate a self-help housing project, they founded the association '*associação de Construção Comunitária por mutirão de Vila Comunitária*' in 1982. (Vaz, 1988)

Acquiring a building terrain posed the first major issue for the association. The first terrain they had in mind belonged to Pró-SBC (p. 58), an enterprise managing the urban interventions in São Bernardo do Campo, which was only willing to sell subdivided lots to individual families. The municipality then proposed an alternative terrain, but juridical and political problems eventually made the acquisition impossible. The third option was found by Zé Albino, the leader of the association, Leonardo Pessina, the architect, and Zé Carlos from the association '*Compras Comunitárias*'. The *Cura Diocesana*, which is the central administration governing the Roman Catholic Church,

had a terrain of 10 000 m² available in front of the factory 'Scania Vabis'. The church established that every family had to pay nine percent of the minimal wage during eight years to acquire the land. To pay the construction materials, they received financial support from CDH, the former name of CDHU (p. 58). As a result, the final project cost for the future inhabitants raised to 21 percent of the minimal wage during ten years. (Vaz, 1988)

Finally having acquired the terrain, it immediately suffered from occupations of other community groups, an issue that is still very recurrent on terrains in São Paulo. After long negotiations, the occupiers left, and full-time surveillance of the terrain had to prevent the site from future occupations. (Vaz, 1988)

On June 14 in 1985, the construction of the houses started and Leonardo Pessina together with Laila Mourad offered architectural and technical support to the mutirão Vila Comunitária. Leonardo Pessina originated from Uruguay, where he participated in various mutirão projects before moving to Brazil. He would become a crucial figure for the Vila Comunitária project, sharing experiences and providing technical assistance every two weeks. He contributed to the works and the people made sure that his travel and alimentation were paid. In fact, he was considered an unwaged technical help, which was very important for the group as they didn't have money to pay a professional of his competence (Vaz, 1988). This way, one could say that Leonardo Pessina was the forerunner of the *assessoria técnica* that is nowadays offering architectural assistance to mutirão projects.



THE MUTIRANTES OF VILA COMUNITÁRIA WORKING ON THE CONSTRUCTION SITE (SOURCE: VAZ, A.)



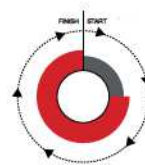
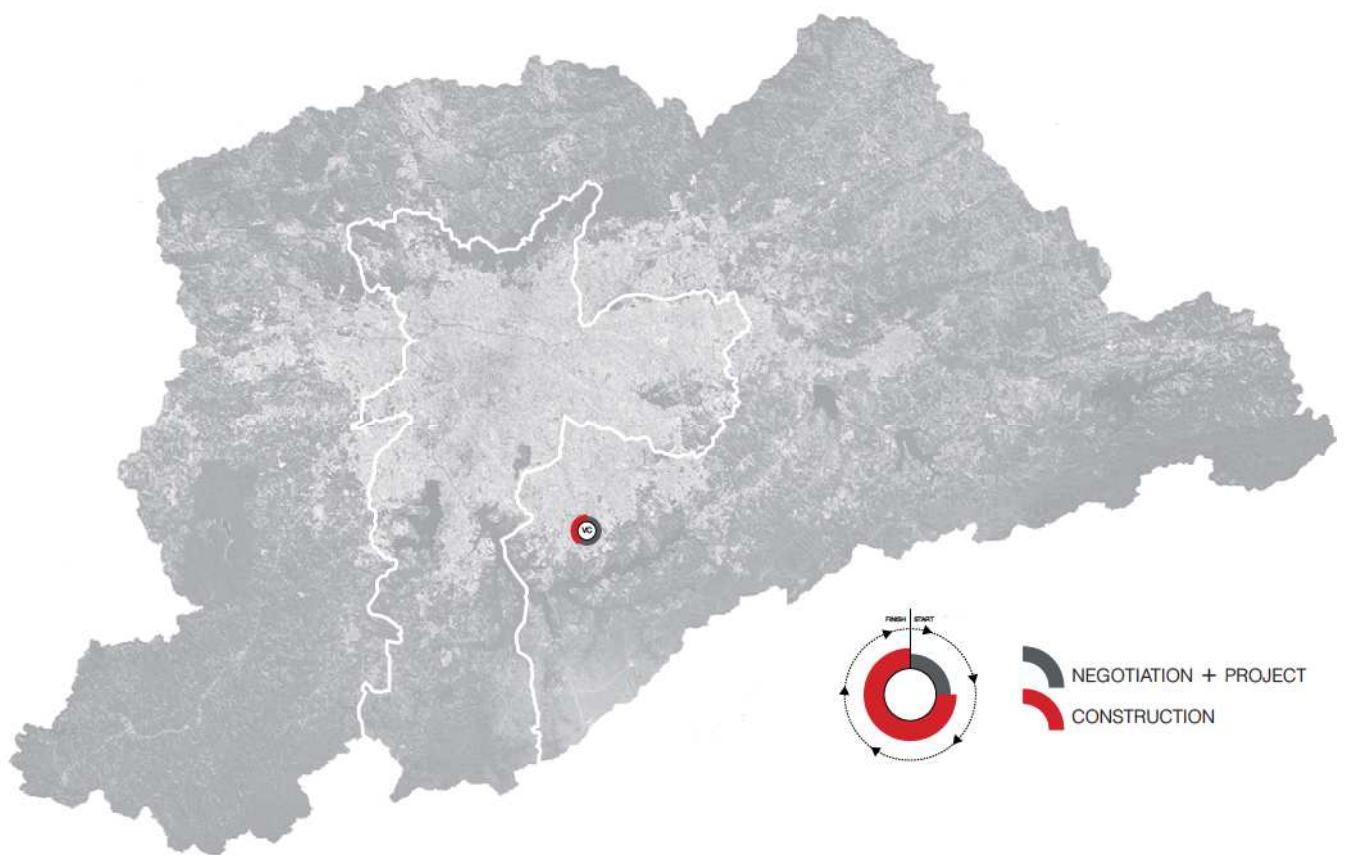
Many authors note several origins of *mutirão* but very often is referred to Uruguayan 'Mutual-Help' practices (Arantes, 2007; Rossi, 2012; Mineiro & Rodrigues, 2012). FUCVAM, *Federación Uruguaya de Cooperativas de Vivienda por Ayuda Mutua*, was an important Uruguayan cooperative movement in the historical development of the concept of *mutirão*. Brazilian movements took the opportunity to collaborate with FUCVAM and that's how *mutirão* and *autogestão* allegedly also moved to Brazil (Mineiro & Rodrigues, 2012). Nevertheless, there is a noteworthy difference between the Uruguayan and Brazilian approach to housing property related to *mutirão* projects. In the Uruguayan case, the buildings are owned by the dwelling cooperative, generally related to syndicates and social movements. They receive financing from the state and pay it collectively back to the state. This results in a collective property in which the inhabitants pay a monthly rent. In the Brazilian case, a much more communitarian association model is applied for *mutirão*. This means that the movement creates a community association to build a housing project. Works are done with public funds and the houses became property of the inhabitants, who must pay the funding back to the government. (Fieldwork: Arantes, 2015)

Leonardo Pessina and Laila Mourad were the two leading architects in the Vila Comunitária project, and they participated from the very beginning in the community's fight for housing. They assisted in acquiring the land and participated in the quest for funding. To design the dwellings, many reunions were organized. There, the architects could present the plans and explain the work that had to be done. Critical discussions between inhabitants and architects became crucial in the project's development process. The two architects didn't take a superior position. Instead, they were part of the group and all decisions were made collectively. To set up a collective

building project, internal regulations were necessary to organize the work. Therefore, a Board of Directors was established to organize the collaborative work process, explain the internal regulations and manage the group meetings. The Board consisted of six participants. Even when the project was finished, the Board kept on existing to manage their cohabitation and represent the community. (Vaz, 1988)

About 22 months after the first works on the construction site were initiated, the 50 houses were completed. Considering that many of the families were previously living in a rented house or room in precarious conditions without any security in terms of tenure, Vila Comunitária offered for many *mutirantes* a novel start in life with new chances, opening possibilities for them and their families. The contribution of 80 hours per week of hard manual labour turned a housing dream into built reality. (Vaz, 1988)

The actual housing units are not the only outcomes of a collective self-help building project as this. Without a doubt, the *mutirantes* (p. 61) gained self-confidence and autonomy throughout the entire process. Managing the entire process from the beginning until the end with the support of engaged architects, they were able to show authorities unforeseen capacities of the low-income population. Some of the inhabitants eventually continued fighting for better housing conditions, supporting other *mutirão* projects and helping others to realise their dream of an own house and a proper place in society (Vaz, 1988). This way, every *mutirão* experiment also acquired an important pedagogic importance, developing into a kind of practice-based schooling in citizenship rights, popular self-organisation, and political negotiations. The design and building process of *mutirão* projects would indeed develop this way into a laboratory of alternative architectural and societal models.



NEGOTIATION + PROJECT
CONSTRUCTION

25 KM





VILA COMUNITÁRIA



1982 - 1987



SÃO BERNARDO DO CAMPO



50 FAMILIES



ASSOCIAÇÃO COMUNITÁRIA DE SÃO BERNARDO DO CAMPO



CDHU



LEONARDO PESSINA AND LAILA MOURAD



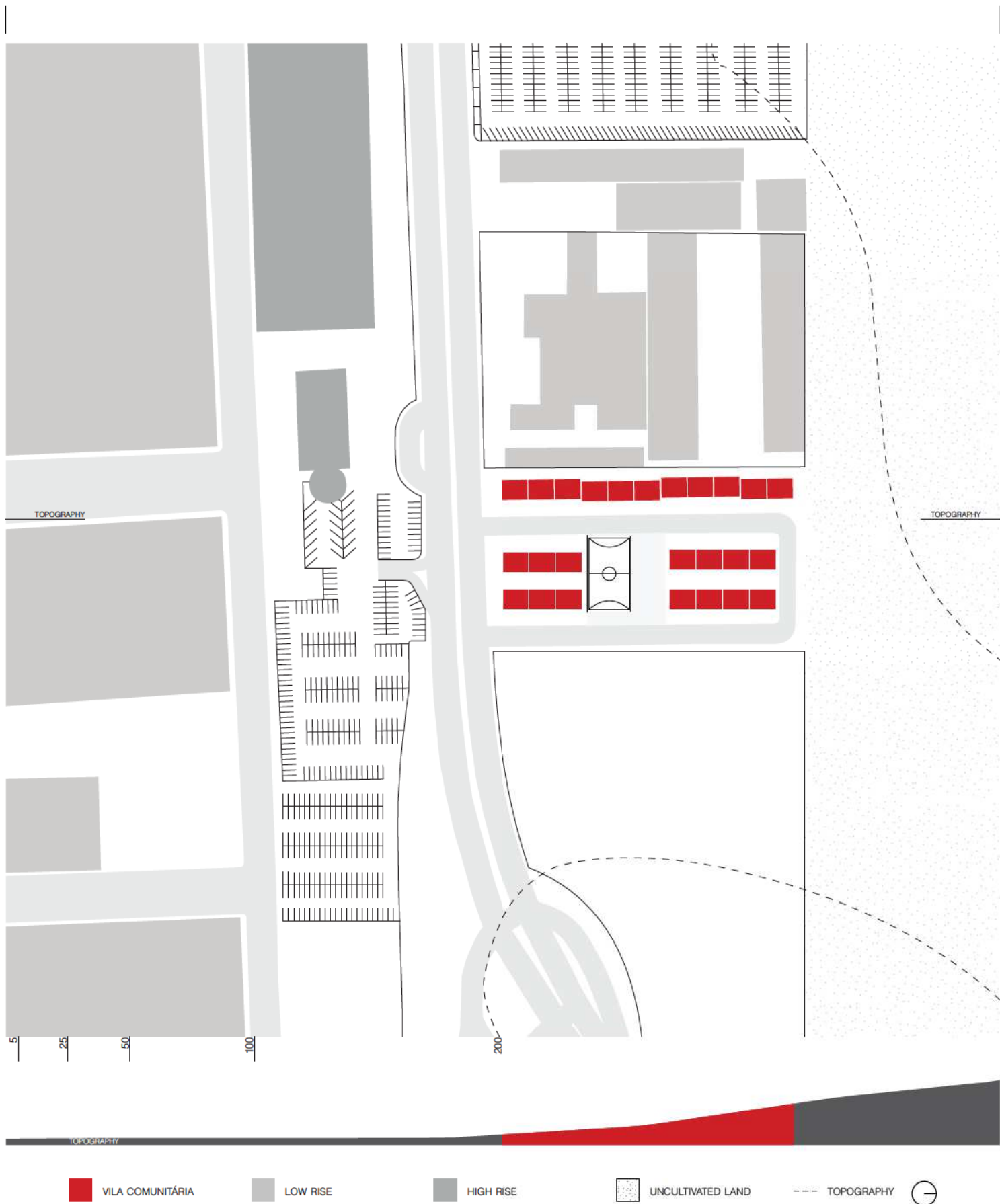
1H50 TO SÃO PAULO CENTRE



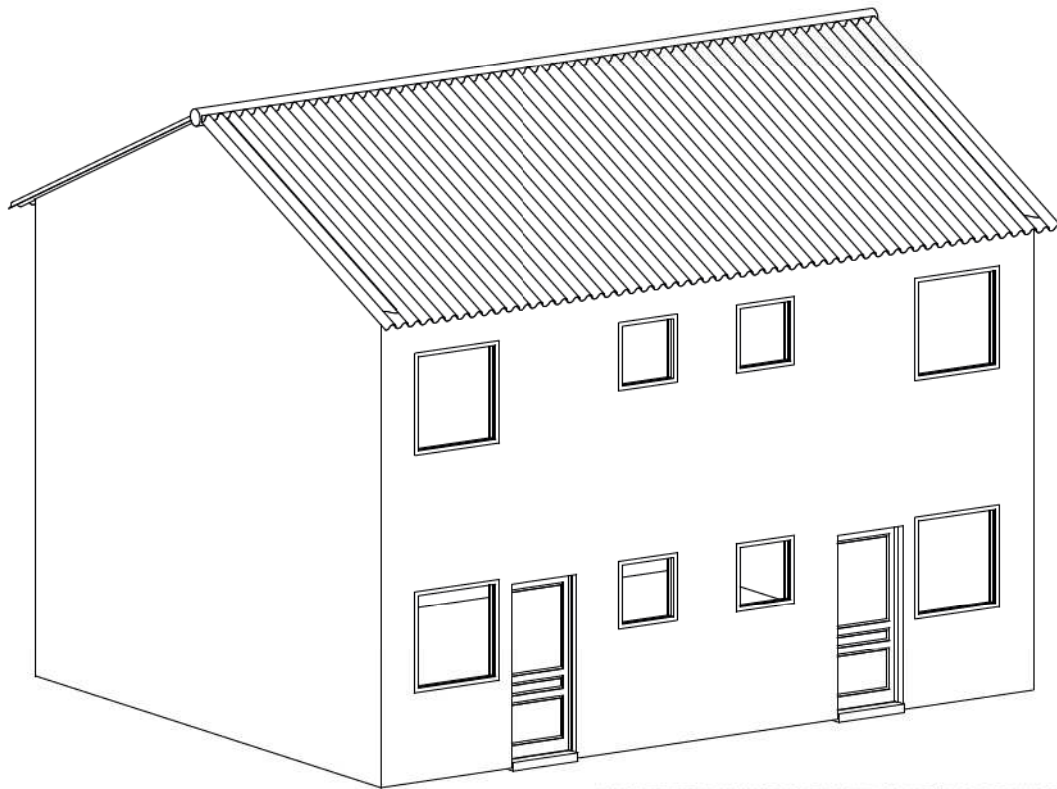
10 000 M²
FLOOR AREA RATIO: 0,46



70 M²
2 FLOORS
50 UNITS/HA



VILA COMUNITÁRIA, SITUATION OF INAUGURATION. EDITED BY AUTHORS. MAP BASED ON GOOGLE EARTH. SLOPE BASED ON GEOCONTEXT



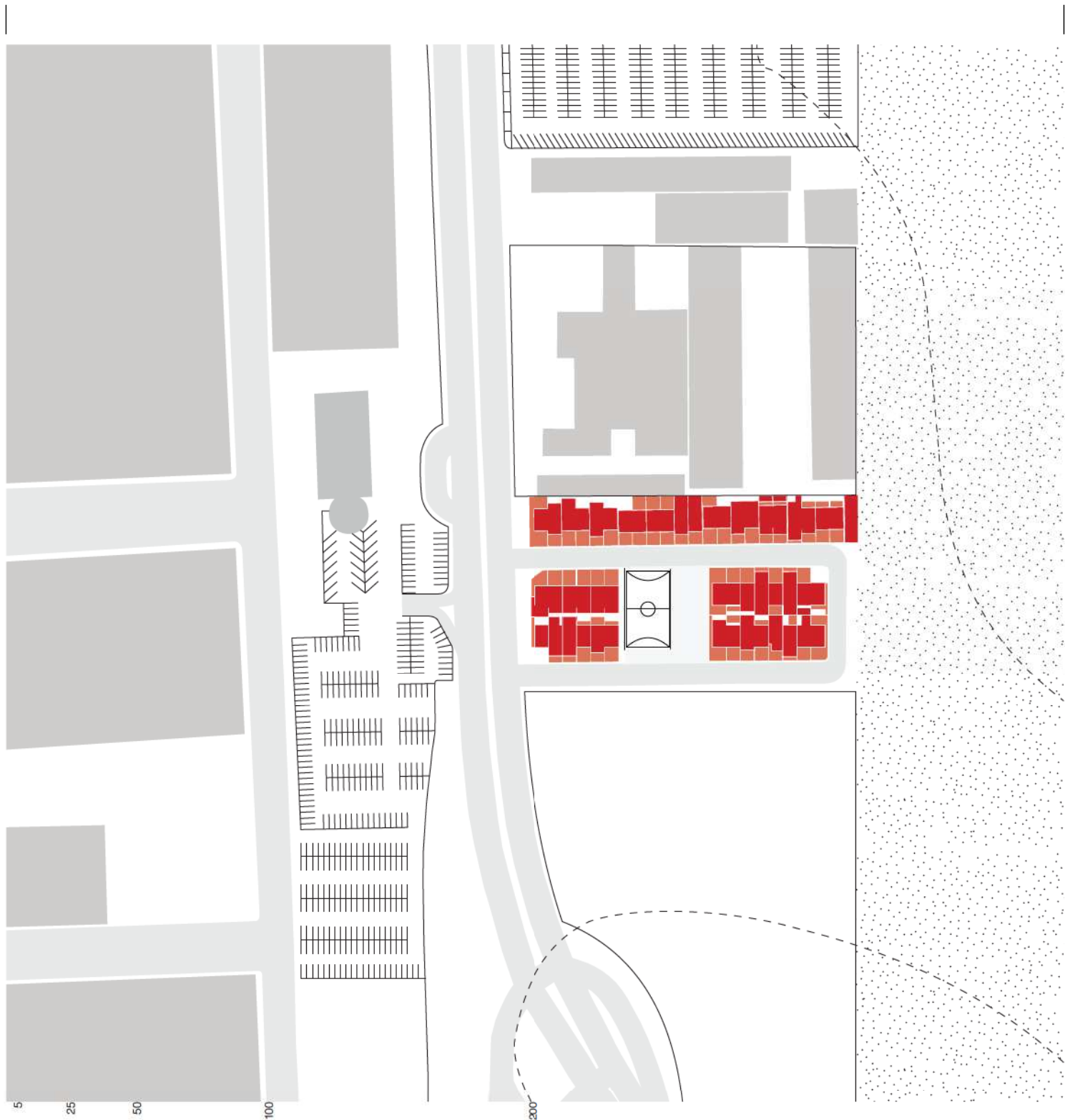
AXONOMETRY OF THE HOUSING TYPOLOGY OF VILA COMUNITÁRIA ON THE INAUGURATION DATE (2016)

1987 THE PROJECT

The Vila Comunitária project is situated in the middle of one of the industrial zones in São Bernardo do Campo. In the South, the Scania factory borders the plot. The Northside consists of a small green area while the highway, connecting the city of São Paulo and the Atlantic coast, is near in the East. Adjacent to the West side, a local hospital is located. Both the automotive industry complex and the hospital are today surrounded by walls and fences while the houses of Vila Comunitária are only sealed off at their own front door. Therefore, the Vila Comunitária project appears somehow as an alien implantation in the region because of its scale and function.

The Vila Comunitária project counts 50 houses, paired two by two. The dwellings are arranged in three parallel rows, with an open area for recreation and common facilities in the middle. The spacing between the building rows is organized in such a way that it provides a front and backyard for each housing unit. (Vaz, 1988)

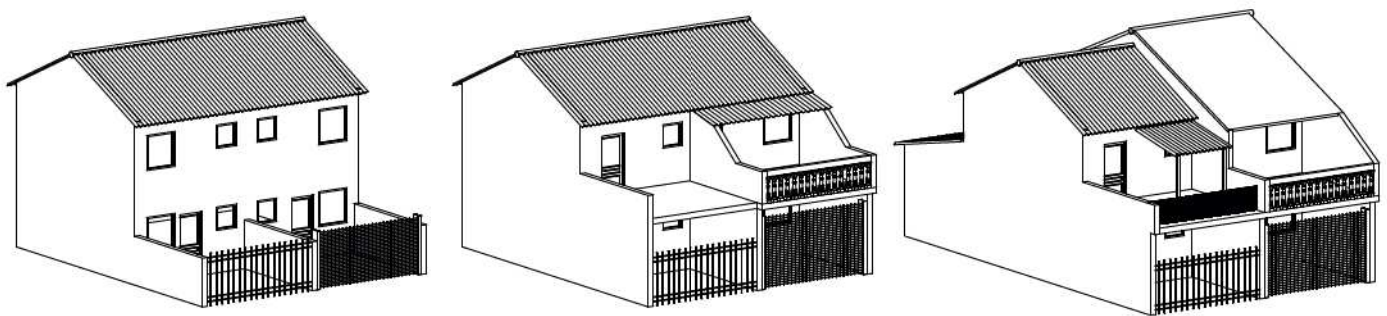
The buildings have a rather simple and logic construction. The walls are executed with a mixture of brick types and the roof consisted of a corrugated metal sheet. Every unit has a ground floor and a first floor. Doors and windows are symmetrically spread to provide a standard configuration.



INITIAL PROJECT
 ADAPTATIONS

VILA COMUNITÁRIA, PRESENT-DAY SITUATION. EDITED BY AUTHORS. MAP BASED ON GOOGLE EARTH. SLOPE BASED ON GEOCONTEXT





AXONOMETRIES OF THE HOUSING TYPOLOGIES OF VILA COMUNITÁRIA IN THE PRESENT-DAY CONTEXT (2016)

THE AFTERLIFE

From the moment the 50 families moved into their houses, the project was drastically adapted and reorganized according to different and altering desires and needs. 25 years later, almost no house remained unaltered and the initial Vila Comunitária project is nowadays almost unrecognizable.

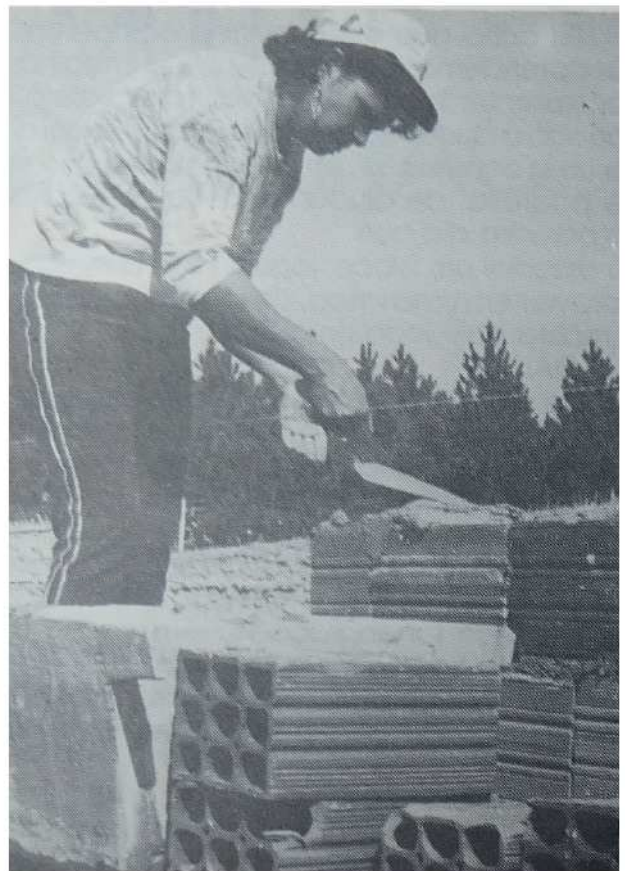
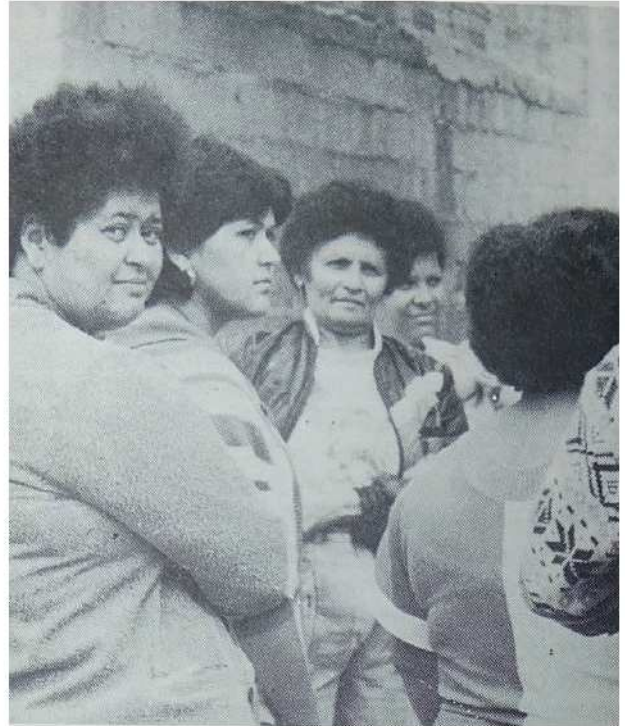
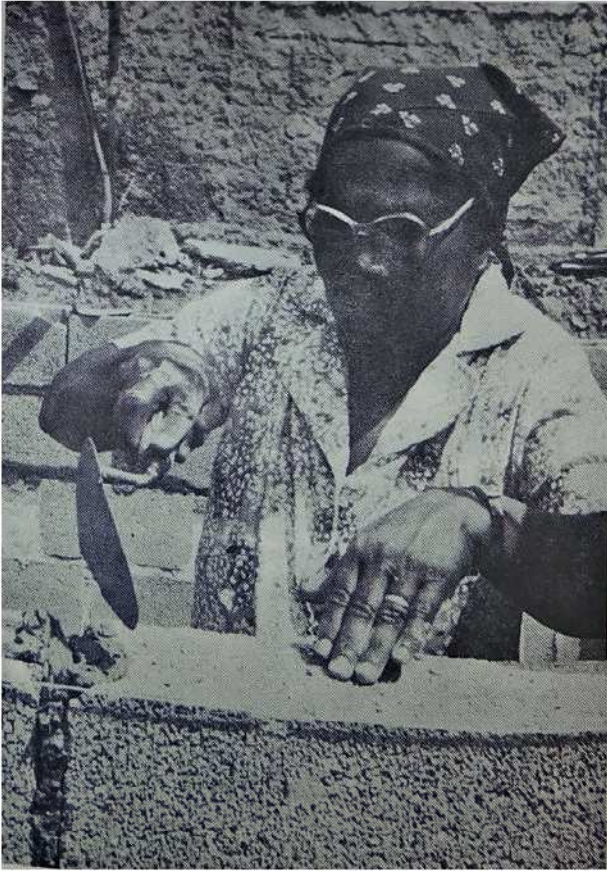
Inhabitants started expanding the borders of their house by building separating walls and fences on the edges of their front yard. This way, each family assured their privacy. It also enabled them to park their cars in a demarcated zone in front of their house. The same delimitation fragmented the backyards.

Step by step, the families were able to expand their houses according to their needs and their budget. Frequently, front yards became roofed with corrugated sheets and later on the roof construction changed to provide an accessible roof. This extra floor, in turn, required a door on the first floor of the original construction. While the car could be parked in a covered private space, the extra floor could be used to hang clotheslines.

A more drastic transformation was the renovation of the original roof which happened for the majority of the houses. People decided to upgrade the corrugated metal sheets into roof tiles. These offer more protection and better thermal conditions inside the house. They took at the same time the opportunity to elevate the first floor and extend the roofs to cover partly their extra created first floor in front or at the back of their house. Floor extensions and elevations go very often hand in hand with family expansion. This is how a favela grows and the same ideology was applied on the Vila Comunitária project.

The adaptations totally mutated the initial project according to shifting aspirations and needs. What was supposed to be open or collective space became divided and private. Wide streets including front yards transformed into narrow lanes surrounded by fences and garages. Private home property and its spatial manifestation often mean a lot to the inhabitants as it allows to show their individual possession. (Mello, 2012)

The substantial transformation of the initial mutirão project could be interpreted in many ways. On the one hand, as so often, design intentions that included vast communal spaces clearly underwent fragmentation and privatization. On the other hand, the initial layout surely provided a functional framework that allowed each family to adapt the unit according to new family configurations, financial gains, and dwelling aspirations.



WOMEN OF THE ASSOCIATION WORKING ON THE CONSTRUCTION SITE OF VILA COMUNITÁRIA (SOURCE: VAZ, A.)

WOMEN AT WORK | AS MULHERES NA OBRA

It is striking that the Vila Comunitária project was almost exclusively developed and built by women. The dominance of women in social movements and *mutirão* projects became frequently seen as a way to express feminism. The rise of social movements in the 1980s were mostly meant to fight for the rights and conditions of industrial workers and defend the democracy. At the same time, women took their chance to fight for their own rights as well, and dwelling conditions seemed therein much more at stake (Moreira, 2012). The men's labour fight ran parallel with the women's fight for housing.

Be that as it may, participating in such a housing movement was and still is a very demanding engagement. It was presumed that women stayed at home to clean, do the laundry, cook and take care of the kids while men went out to work. The emergence of movements brought a lot of women together, discussing not only political and social problems but also their own relational issues. They became aware this way of their subordination to men and started to discuss equal gender rights. Social movements opened up a lot of female minds that finally recognized their common problems and looked for solutions. For many of them, the main intention was that women and men would compete together, side by side, as one group. (Fonseca, 2011; Moreira, 2012; Vaz, 1988)

Also in Vila Comunitária, mainly women participated. The majority of them had never worked on a construction site, but the lack of experience was largely compensated by motivation. Although their work was conventionally considered male, many women became this way aware of their at least equal forces, instigating their motivation even more. Despite the hard and exhausting work, most participants felt that their work carried a significant symbolic value, both for empowering themselves and for shaping the new Brazilian democratic society (Vaz, 1988). The fact that Laila Mourad, a female architect, was in charge of technical assistance, influenced a lot of female

mutirantes (p. 61). Women consistently started to execute organizational and political functions, which resulted in respect and dignity. This convinced even more women to participate and a positive evolution of gender relations progressed. (Moreira, 2012)

Per month each family had to work 80 hours, and the internal regulations included that the unexecuted hours had to be paid to hire a worker. Apparently men were not very eager to combine their job with constructing their own dwelling. Various women instead seemed to be much more willing to engage in the *mutirão*, while still taking care of the household. Some of their husbands were not very pleased with their participation in the project while others eventually joined the project to split up the amount of hours. Gradually, their collective suffering and labour established stronger community bonds. At moments, the construction site became a site of pleasure and solidarity, living together and mutual help, although without doubt conflict and dispute must have been omnipresent as much. (Vaz, 1988)

Besides the works on the construction site, also reunions had to be attended. Especially for women, it's hard to combine these activities with the everyday household and children (Vaz, 1988). Nevertheless, joining a movement is often the only option to improve precarious living conditions and gain more rights. Participating in a *mutirão* project implies at least the same struggles. Working on a construction site involved hard physical labour but for most of them, this was the only way to reach better housing conditions. For some, women's participation in housing movements remains a questionable manifestation of feminism when it implies exhausting work on a construction site. For others, acquiring autonomy and independence in the design and production of their dwelling environment makes the physical labour rather a well-chosen tool to claim equal rights to the city.



COPROMO [1990]

CONSOLIDATING MUTIRÃO | *CONSOLIDAR MUTIRÃO*



ELEIÇÕES
2016
PR: CANDIDATOS DE GRUPO
VEREADORES & VEREADORAS
FILIEM-SE AO P 10-28
97401-4621
FONE: 3599-8398



BLOCO-7



1985

1990

1995

2000

2005



COPROMO [1990]

CONSOLIDATING MUTIRÃO
CONSOLIDAR MUTIRÃO



MUNICIPALITY SÃO PAULO

FUNAPS COMUNITÁRIO

FUNDO MUNICIPAL DE HABITAÇÃO

JÂNIO QUADROS [PTB]

LUÍZA ERUNDINA [PT]

PAULO MALUF [PDS]

CELSO PITTA [PPB]



STATE SÃO PAULO PMH

FOUNDATION USINA



FED. MULHERES PAULISTAS
PROGRAMA MUTIRÃO - UMM

PPM - FASE 1

PPM - FASE 2

ORESTES QUÉRCIA [PMDB]

FILHO [PMDB]

MÁRIO COVAS [PSDB]



BRAZIL

CONSTITUTION
OF BRAZIL



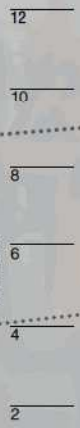
JOSÉ SARNEY [PMDB]

COLLOR [PRN]

ITAMAR FRANCO [PMDB]

FERNANDO HENRIQUE CARDOSO [PSDB]

SÃO PAULO - URBAN AREA POPULATION
MILLIONS



SÃO PAULO CENTRE

SÃO PAULO PERIPHERY

GDP - GROSS DOMESTIC PRODUCT
USD BILLION

ECONOMICAL
CRISIS

PLANO REAL

ECONOMICAL
CRISIS

12

10

8

6

4

2

3000

2500

2000

1500

1000

500

BUILDING DEMOCRACY | CONSTRUIR À DEMOCRACIA

1988 CONSTITUTION

By the time that the Vila Comunitária project was finished, the military regime belonged to the past and democracy was gradually consolidating. Step by step, Brazil was moving away from centralized authoritarianism and heading to equality, freedom and justice. Brazil's 1988 Constitution meant a milestone for this emergent redemocratization (Flynn, 1989). Brazil was now officially a Federal Republic and several privileges reserved for the 'happy few' became fundamental citizenship rights granted at least legally to each free citizen (Friendly, 2013).

The 1988 Constitution was the first federal legal document that explicitly included Urban Reform. Urban Reform had been on the agenda of progressive and left-wing sectors since the early 1960s but was largely suppressed during the military regime. It stemmed from Lefebvre's notion of the Right to the City, which became incorporated into the Constitution in two main principles. The first principle prioritized the social function of property in the city while the second one ensured the democratic management of urban policy. Unfortunately, both principles were dependent on the elaboration of a master plan. This made that the Constitution turned out rather a symbolic document for social movements to legitimize their various strategies in social struggles without directly instrumentalizing substantial urban reform. (Friendly, 2013)

Urban Reform would be a turning point, facilitating more democratic ways of city making (Rolnik, 2011). Social movements were not only frontrunners in defending the importance of Urban Reform (Rolnik, 2011), but they also played a leading role in proposing new, advanced and democratic housing policies that could replace the large housing complexes implemented by the military regime. It's in this context that *mutirão* was introduced by social movements as a novel democratic way of housing production, (re)building the city in a radically, participatory and democratic way. (Arantes, 2007)

NEW ARCHITECTURE - ARQUITETURA NOVA

Architecture played a crucial role in social movement's quests for more democratic ways of city making. Sérgio Ferro and his group named *Arquitetura Nova*, founded in the middle of the military regime, played a leading role in this quest. They searched for a genuine democratization in architecture both in production, by changing the relationship between architect and worker, as in consumption, by increasing the provision of adequate housing. (Arantes, 2002)

In '*O Canteiro e O Desenho*', Sérgio Ferro (1979) articulated his concerns about the production of architecture. For Ferro, modern architecture stood namely in a battlefield between labour and capital with workers that were far removed from that what was their work of art. He argued that no progressive architecture would be possible without the transformation of the relationship between design and construction into a more collaborative and dialogical alliance between architect and worker (Williams, 2009).

Self-construction was, therefore, according to Ferro (1979), the prime solution to restore the distorted relationship between design and construction. Furthermore, self-construction was seen as a new starting point for society, as an educational process with the construction site as a school where a 'new urban culture' could be built. (Ferro, 1979)

In line with Ferro's theoretical concepts, *Arquitetura Nova* proposed a new kind of design professional; one that didn't look down out of an alleged 'ivory tower of knowledge', but one that engaged in the middle of construction works with 'rolled up sleeves'. These 'militant' architects wouldn't stand at the sideline, letting the rapid urbanization of the city pass by. Instead, they would radically engage in the real world of needs and demands 'out in the field'. (Arantes, 2002)

HOUSING BY PEOPLE

Almost at the same time, John Turner (1976) published his seminal work "Housing by People". Here, Turner made a related reflection with regard to the prevailing architectural practice and the place of end users in the production process. According to Turner (1976), housing could be much better provided and managed by the dwellers themselves, rather than being fully centralized by the government who should focus instead on support and infrastructural necessities. Turner (1976) introduced the term 'self-managed construction', empowering families or small local communities to design, construct and manage their own dwelling needs.

Autonomy is a key element in this novel concept (Jacobi, 1981). According to Turner (1976), excluding dwellers from the decision-making process mostly results in so-called 'misfits', imposed housing 'solutions' that overvalue material aesthetics over the real use value of dwellings. Turner explained how it is common for both public and private agencies to 'tackle' an alleged housing problem by building houses or flats which the majority cannot afford, nor can these agencies possibly subsidize them on a large scale. On top of that, Turner's case studies illustrated how conventional top-down rehousing schemes often result in worse dwelling conditions when taking values as social and economic access into account. Instead, Turner advocated autonomy, stating that "*housing and, by implication, all other personal and locally specific services, must be autonomous*" (1976, p. 8). As such, governmental and international organizations should rather invest in basic resources such as land, technical assistance, and basic infrastructure while supporting people at the local level to take control over the actual production of housing solutions.

Turner's credo that defined "*housing as a verb*" (1976, p. 62) is very present in the *mutirão* practices that were carried out in São Paulo, and likewise Ferro's plea to shift importance from "product" to "process" in a design and construction project still provides the main theoretical legitimization for *assessorias técnicas* such as Usina. Nevertheless, the introduced opposition between "product" and "process" will also provoke major critical reflection on the factual spatial outcomes of *mutirão* projects, as in many cases the architectural and urban quality remains doubtful.

1988 THE MUTIRÃO MOMENTUM

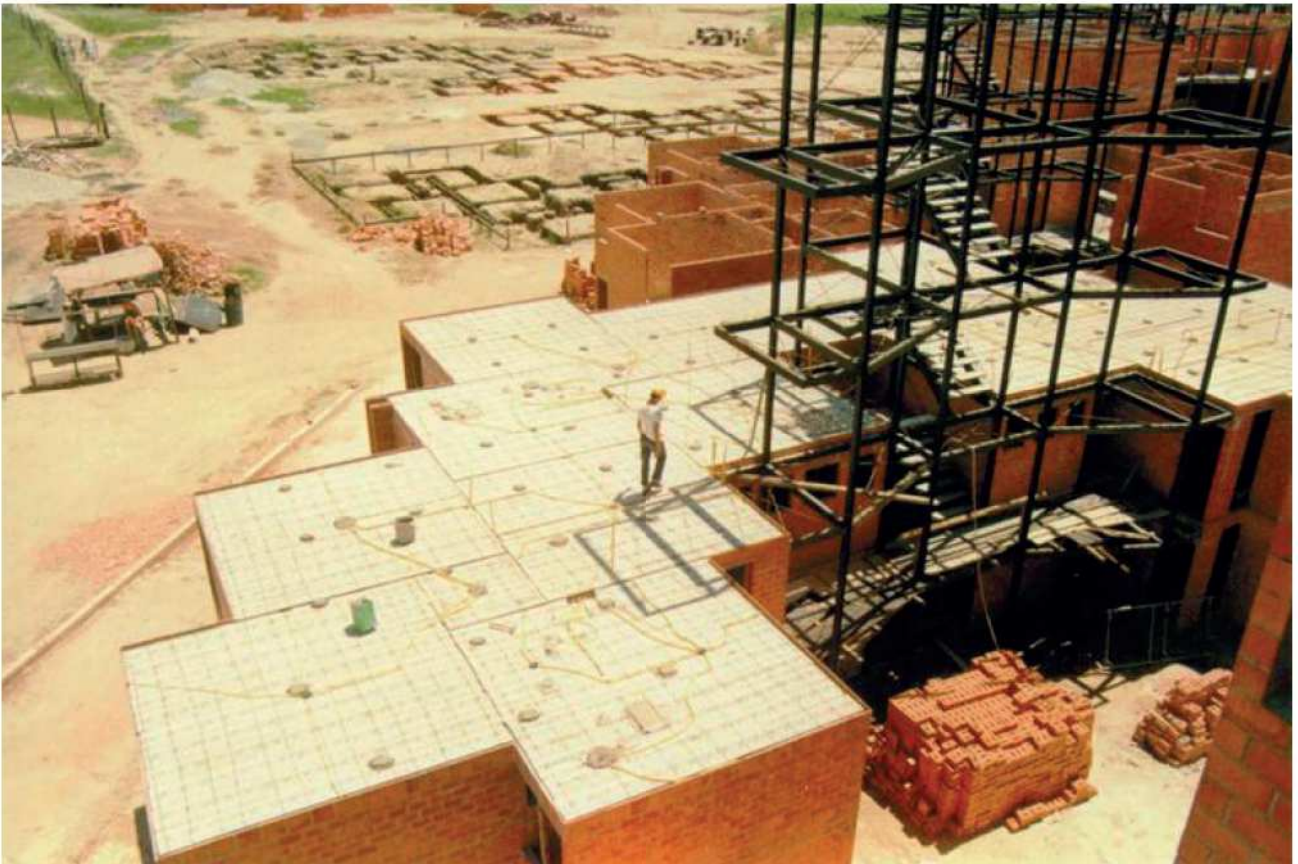
With the unexpected victory of a leftist mayor, Luiza Erundina (PT) in 1989, social movements gained unforeseen political recognition and militant architects were set to engage in the first 'red' São Paulo in history (Arantes, 2002). Erundina's

left wing government implemented the principles of Urban Reform expressed in the Constitution and began experimenting with participatory budgeting (Friendly, 2013). São Paulo turned into "*a laboratory of sorts of new strategies of local governance and direct democracy*" (Fernandes, 2007, p. 212). The period under Erundina's mandate meant a node in history where the convergence of different roads substantially changed the agency of São Paulo's social movements and militant socially engaged architects in an unforeseen, and afterwards never equalled way. (Fieldwork: Barbosa, 2015)

Under the management of Luiza Erundina and the progressive director of Housing, Nabil Bunduki, an Office for Low-Income Housing was institutionalized and soon a new housing programme named *Funaps-Comunitário* (p. 58) followed. The programme established *mutirão* as the main form of housing production in São Paulo City and regulated the operations of militant architects. These architects were required to form NGO's, under the name of *assessoria técnica*. Also Usina established itself in 1990 as an NGO due to *Funaps-Comunitário*, this among 23 other *assessorias técnicas* in São Paulo (Arantes, 2007; Barbosa, interview 2015/09/09). *Mutirão* initiatives, no longer in opposition to the state, could now rely on governmental support. The glory years for *mutirão* projects were announced. (Arantes, 2007)

As progressive as the *Funaps-Comunitário* might have been, it needs to be seen in a nuanced light. At that moment, Brazil, in general, was dealing with a recession, inflation, salary drops and high unemployment rates, all due to the wake of the end of the military regime (Rolnik, 2011). In addition, Quadros, the predecessor of Erundina, had left São Paulo with "*a staggering debt, a bloated payroll and a chaotically disorganized bureaucratic machine*" (Nylen, 2003, p. 36). With all these budgetary problems, 'self-managed construction' was more or less the only option for substantial social housing production in order to remedy the housing deficit in this economic context. *Funaps-Comunitário* was, thus, as much created out of imagination as out of necessity.

Various *mutirão* experiments became therefore heavily criticized as well. As many critics, Oliveira (1998) saw *mutirão* as a form of unpaid labour, contributing to the exploitation of labour force: "*Mutirão is a form of the State to give up their responsibilities and to pass its responsibilities on to its citizens*" (Oliveira, 1998, p. 18 – translated by author). In Turner's terms, however, they were also the best-placed actors to take up this responsibility, acknowledging the 'popular sector' as the best-equipped agents to produce localized and diversified solutions.



COPROMO DURING THE CONSTRUCTION WITH THE STAIRS AS SCAFFOLDING (SOURCE: USINA)

Mutirão projects were multiplying all over São Paulo municipality due to *Funaps-Comunitário* (Arantes, 2007). This innovative policy on participatory budgeting went beyond its borders and significantly influenced many other municipalities as well (Rolnik, 2004). As such, mutirão Copromo, although not a direct example, can be considered as an indirect result of *Funaps-Comunitário*.

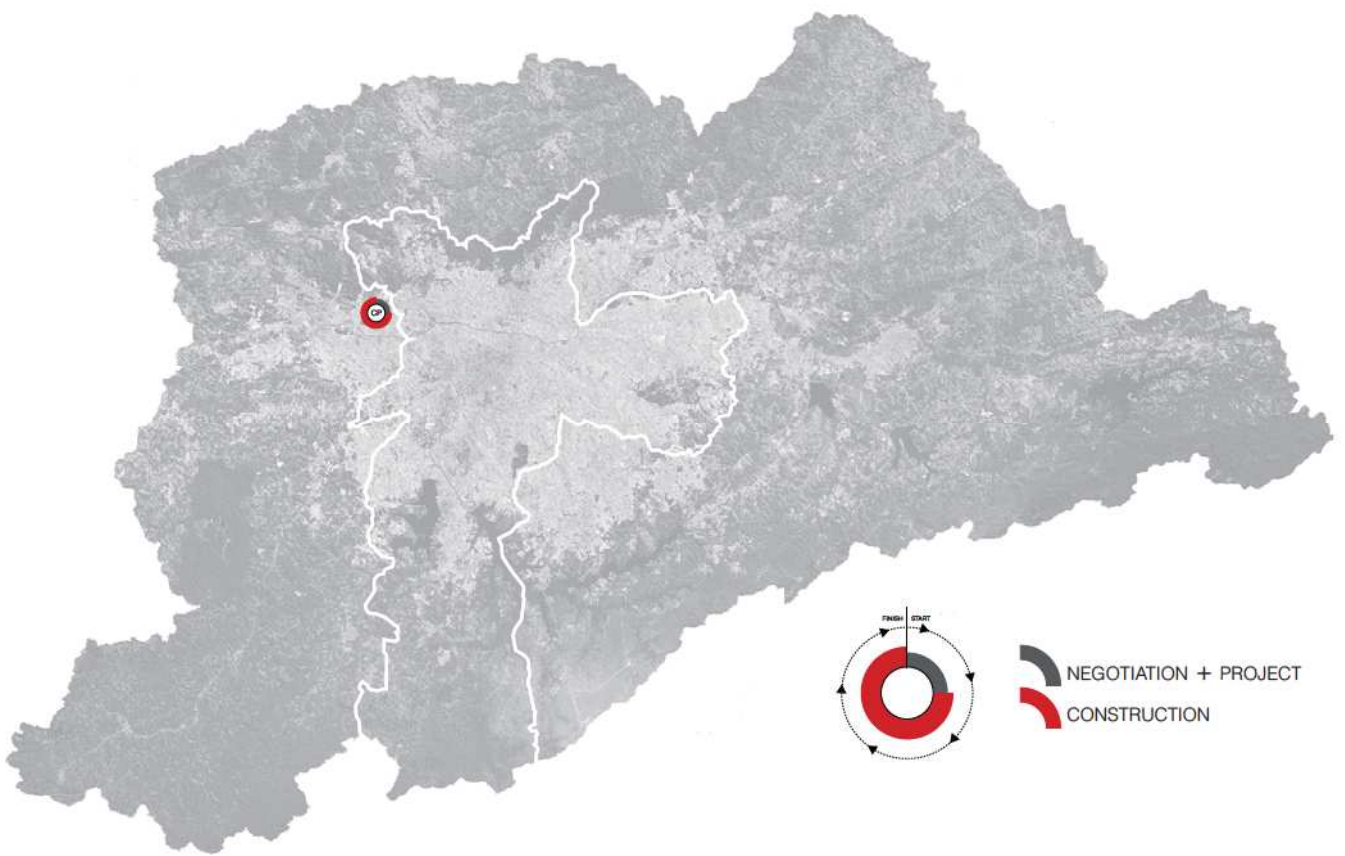
The story of mutirão Copromo started with the story of mutirão '*Terra é Nossa*'. In May 1986, a group of residents who lived in a slum next to an ancient arm of the Tiête River organised themselves to take initiative in the struggle for land and housing rights. During the mobilization, other residents of the neighbourhood joined the group and about 500 families were gathered. From this point onwards, Usina was involved in the project (Nazavinas, 2007). One year later, during Carnival, the families occupied a terrain nearby their favela. By the time COHAB (p. 58) claimed the ownership of the terrain, the families were already installed, organized and prepared to persevere in the struggle. In October 1989, COHAB granted the area to the families and the permission of the use for 10 years with the right to purchase the land at the end (Oliveira Júnior & Abiko, 2004). By that time the design was finished, and the works on the construction site were initiated shortly afterwards. (Nazavinas, 2007)

As the works progressed, the mutirão '*Terra é Nossa*' drew a lot of attention. The association realized the massive need for dwelling and in order to expand the housing movement in Osasco, the association decided to start an enlistment of interested families. After one week, more than 10,000 families gathered and from this enlistment association Copromo was created (Arantes, 2006). The novel association, Copromo, set its heart on a grand terrain, close to the site of '*Terra é Nossa*', so the association took initiative and built its headquarters on the terrain to claim ownership of the site. (Oyola, 2007)

The negotiations with Osasco's City Hall about the purchase of the terrain encountered a lot of obstacles and wrangles. Going from broken promises and decree-laws of expropriation to the City Council refusing to negotiate, apparently, pretty much everything stroked against Copromo and their mutirão aspirations. (Oliveira Júnior & Abiko, 2004)

Meanwhile, the association Copromo didn't sit on their hands. On the contrary, they initiated the excavation of the foundations and already produced parts and elements that could be used in the construction later on. Meanwhile, many of the families lived in a rented house or room, but overall in precarious conditions. The obligation to pay rent mostly burdened the financial capacity of these families. For this reason, some families decided to already move to the occupied terrain and improvise a temporary settlement. The association encouraged and supported this action by providing basic materials for the barracks. This way the families could not only save money but could also exert more pressure on Osasco's City Hall by further consolidating the land occupation. (Oyola, 2007)

The combination of the consolidation of the occupied area and recurring events organized by the association engendered the conditions for the (re)opening of the negotiations. Until then, Osasco City Hall refused to negotiate with those who were considered 'invaders'. Eventually, an agreement was reached and the originally intended plot would be divided equally between the City Hall and the Association. Considering Copromo's headquarters were located on the part that from then on belonged to City Hall, they were demolished and rebuilt, but this time without much concern. (Oyola, 2007). The new headquarters, not succeeding to set up a collective space for the entire group, can be seen as an indication for the future division.



NEGOTIATION + PROJECT
CONSTRUCTION

25 KM





COPROMO



1990 - 1998



OSASCO, JARDIM PIRATININGA



1 000 FAMILIES



ASSOCIAÇÃO PRÓ-MORADIA DE OSASCO



CDHU: UMM



USINA



SELF-BEARING CERAMIC BLOCKS
METALLIC STAIRCASES



2H20 TO SÃO PAULO CENTRE



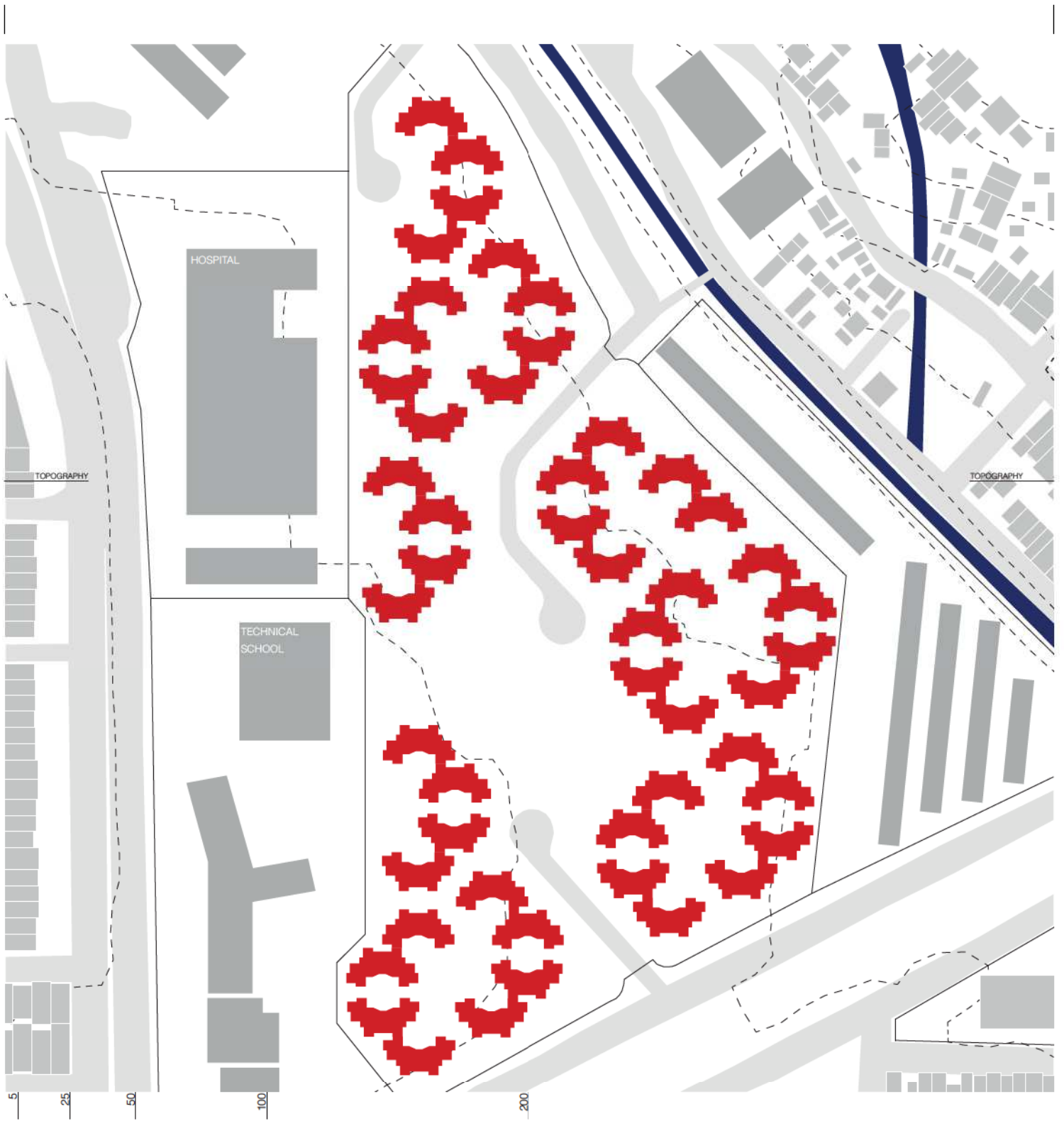
53 530 M²
EVEN TOPOGRAPHY
FLOOR AREA RATIO: 1.16



54 M²
5 FLOORS
187 UNITS/HA



PARKING COEFFICIENT: 1
1 000 PARKING SPACES



MAP OF COPROMO, EDITED BY AUTHORS. MAP BASED ON GOOGLE EARTH. SLOPE BASED ON GEOCONTEXT

BRICK, UNIT, BLOCK, NEIGHBOURHOOD | TIJOLO, UNIDADE, BLOCO, BAIRRO

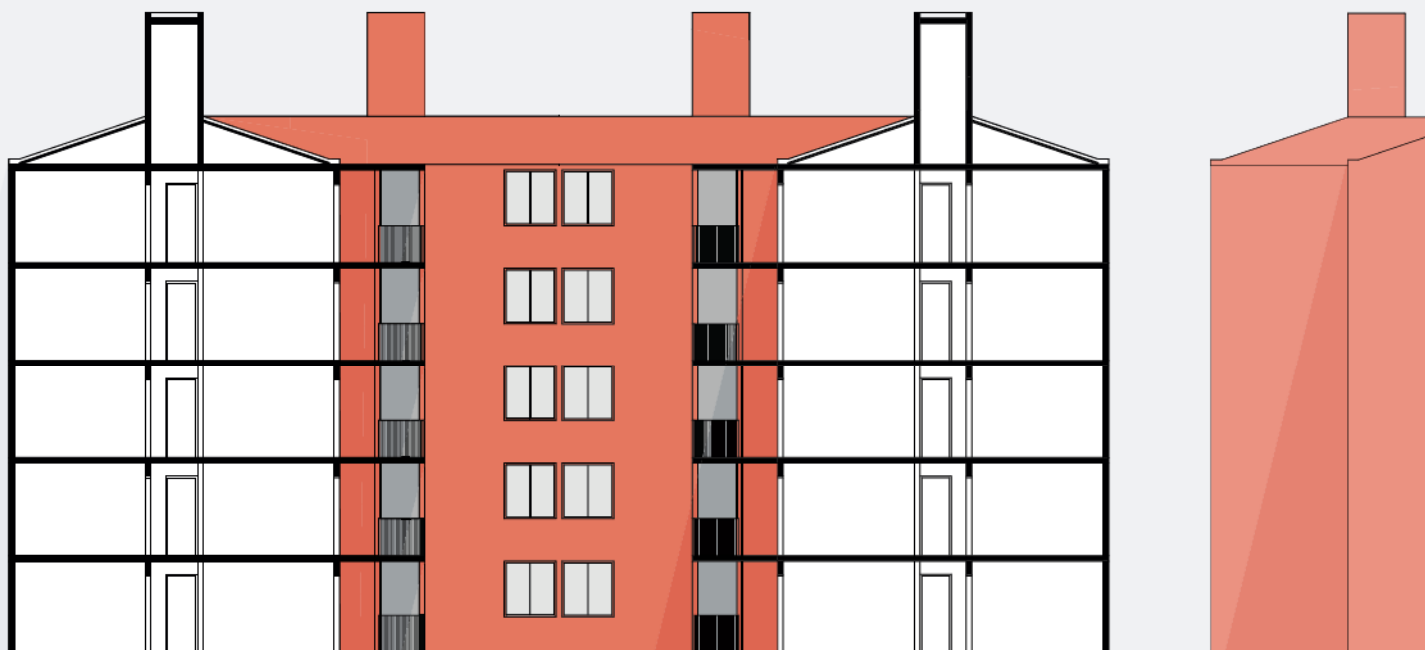


AERIAL VIEW OF COPROMO (SOURCE: USINA)

OSASCO - A BORDERING MUNICIPALITY

Mutirão Copromo is located in Jardim Piratininga in municipality Osasco, an adjacent municipality in the north-west of São Paulo, and lies 20 kilometres (or in terms of public transport more than two hours) away from São Paulo centre. Osasco grew historically as an industrial city from end 19th century onwards, considering that the soils were not very suitable for the practice of agriculture. Nowadays, an industrial decentralization is happening and Osasco is moving towards a commerce and service city. (Osasco Prefeitura, 2014 - website)

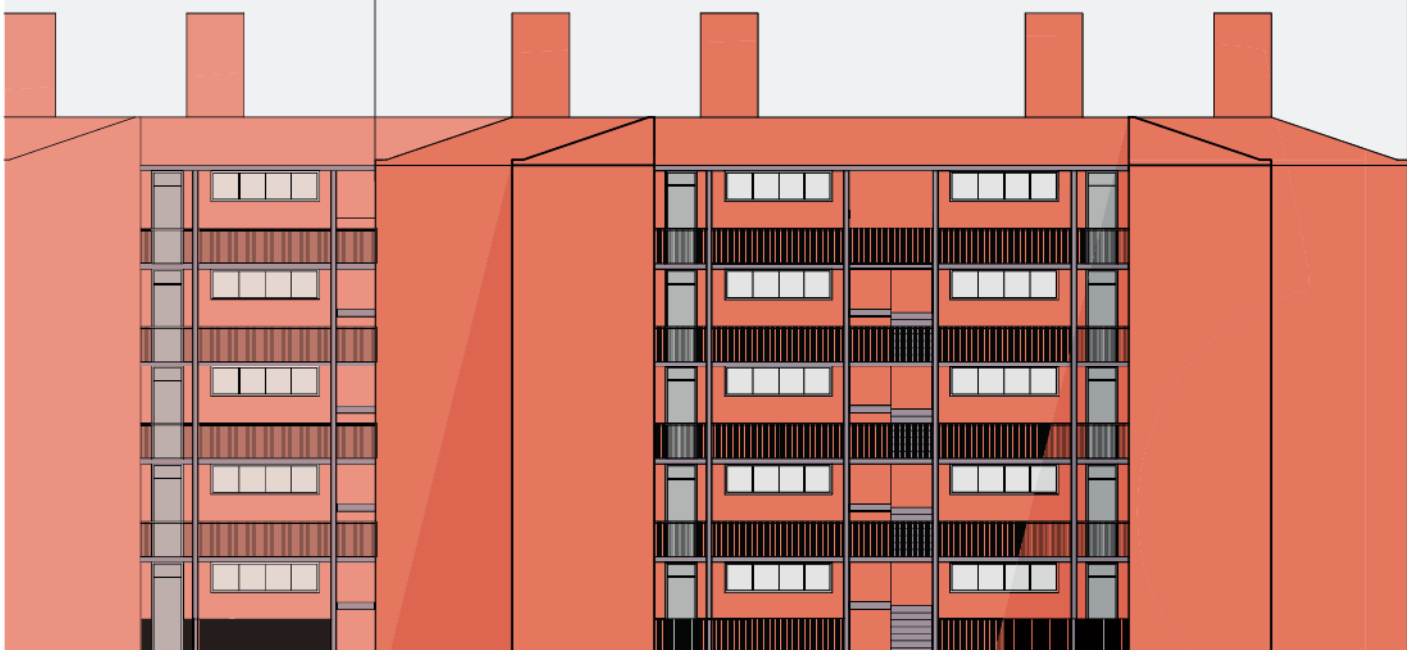
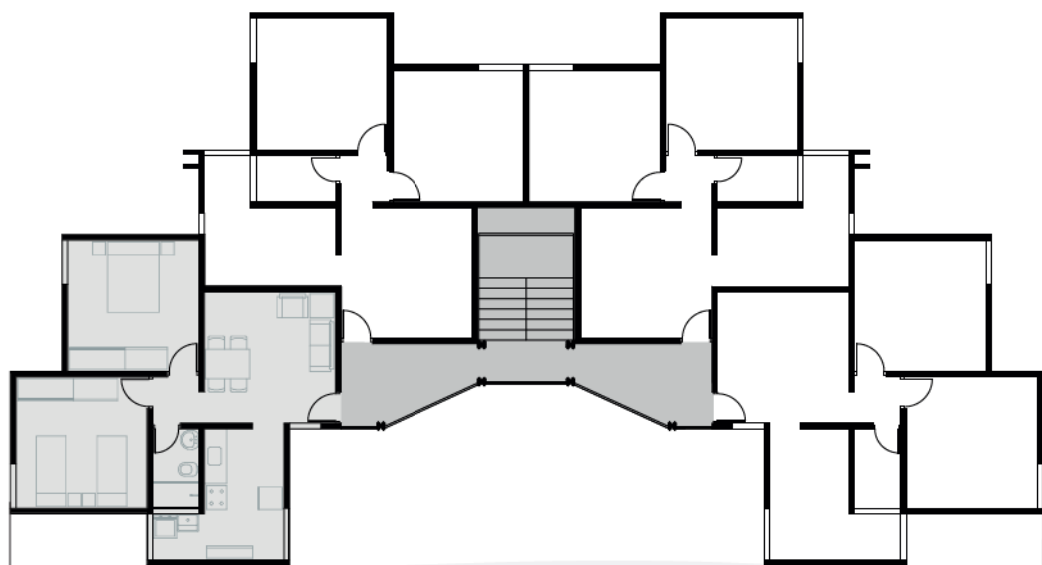
In the eastern part of the project an ancient branch of the Tietê River borders Jardim Piratininga and the site of Copromo. Because the terrain of mutirão Copromo is quite flat, a large part of the terrain used to be flood area of the Tietê river (Nazavinas, 2007). On the other side in the West, public facilities - a hospital and a technical school - and the artery Avenida Getúlio Vargas border the site of mutirão Copromo. Besides that, Jardim Piratininga is a predominantly residential area, where artery Avenida Getúlio Vargas forms the main link with the north of Osasco and its centre. (Osasco Prefeitura, 2014 - website)



COPROMO: PLANS AND SECTION

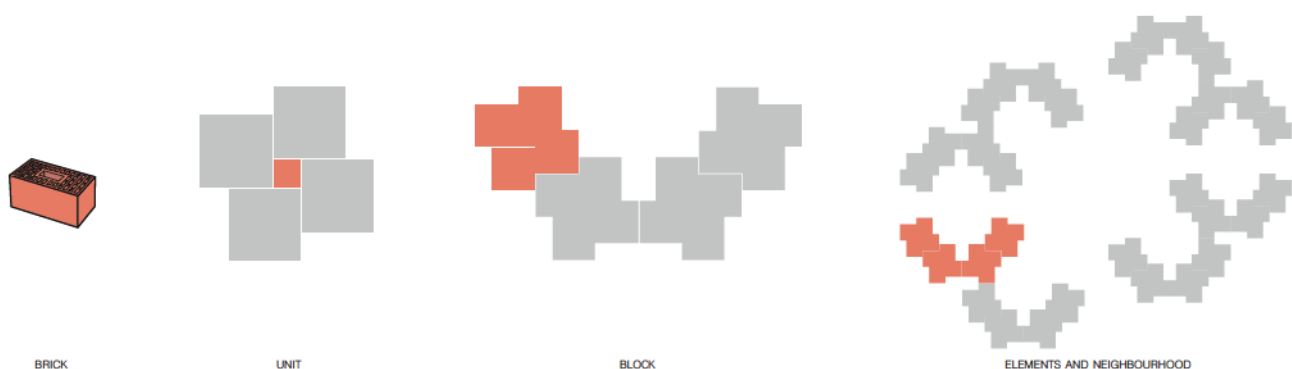
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EDITED BY AUTHORS, BASED ON PLANS AND SECTIONS OF USINA





COPROMO'S PLAYGROUND IN THE MIDDLE OF THE CONDOMINIUM (2015)



THOROUGH PROCESS OF ORGANIZATION

Copromo has a total of 1 000 units and the design of the entire project started with the smallest construction element possible, a structural brick with dimensions 11.5 cm x 24.5cm x 11.5cm. With this basic module, a square from 1.25 m x 1.25 m, was formed. This open space concentrates the circulation inside the unit, collecting four bigger communal areas. One of these collects the 'wet areas' (kitchen, bathroom and laundry), another one the living area and the two others enclose the bedrooms. The unit is the result of a thorough process of organization. (Fieldwork: Usina, 2015). Through different rounds of meetings and discussions, the association decided that for the entire project a standard typology of 54 m² would be used. (Oyola, 2007).

With the layout of one unit, the next step in the process of mounting could be taken. Rotating around a central core, four units were assembled on each floor. With five floors, each block eventually joins 20 units. Both the horizontal circulation between the units and the vertical circulation between the different floors is made by exterior metal staircases. (Fieldwork: Germano, 2015)

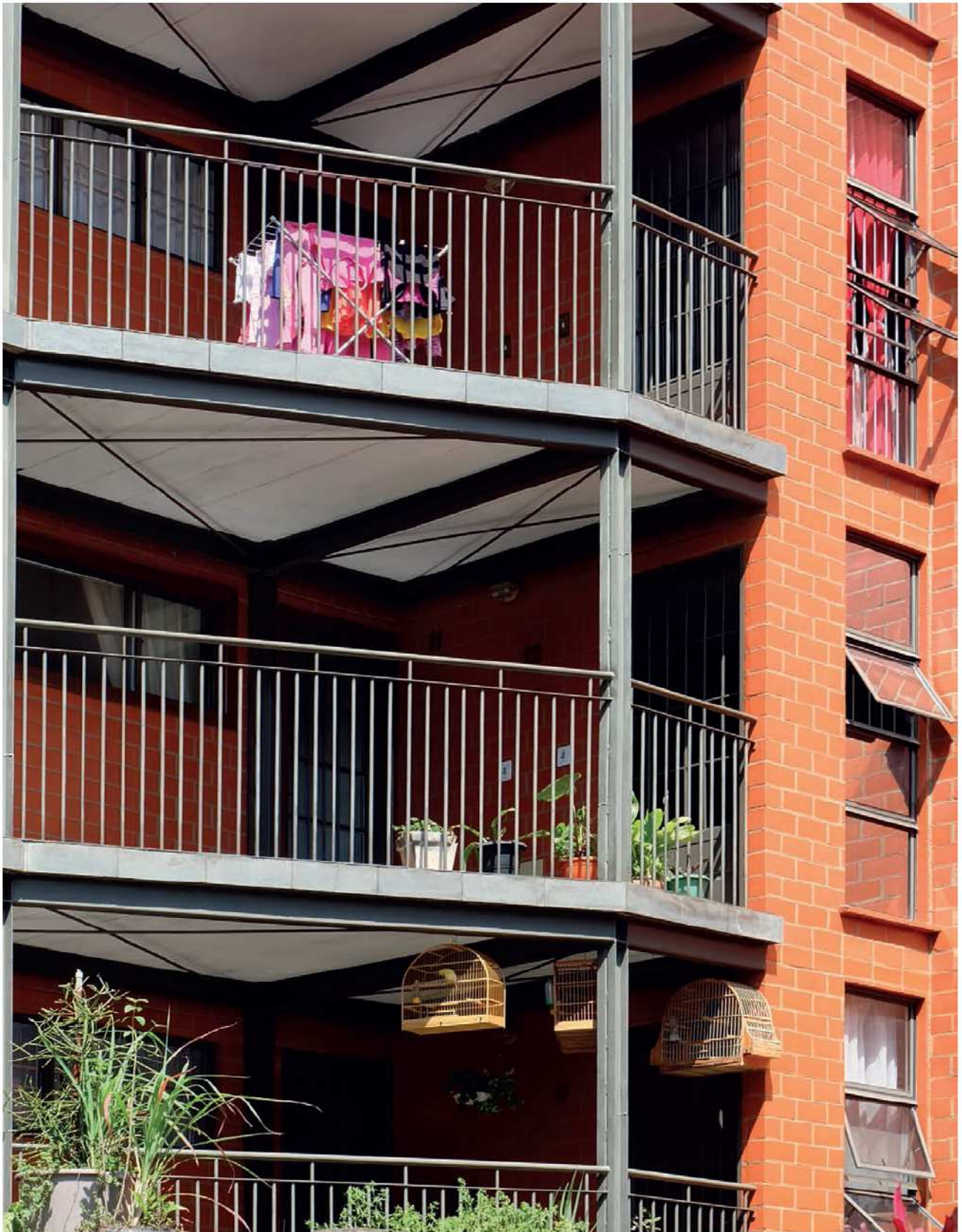
Each of these blocks is paired with another block, forming an 'element'. These elements are on their turn implemented in a larger 'neighbourhood'. The design zooms out with every step and from the masonry block to the condominium every design decision is discussed with the whole group. Eventually, the interconnection of the 50 blocks (or 8 'neighbourhoods') is formed by a central parking pocket and a playground for the children in the middle of the project (Fieldwork, 2015). The attempts to interconnect the units into a unified project is a recurrent aspect in Usina's work and distinguishes as such from a more banal private market or conventional social housing solutions. However, at the same time, all these units, blocks, elements and neighbourhoods together form a condominium surrounded by high walls, secluded from its environment and forming a typical gated community. Except for the guarded entrance, there isn't any visual contact, nor interaction between the Copromo project and its surrounding urban fabric. Ultimately, the product of *mutirão* of a highly collective and collaborative *mutirão* process seems to reproduce various aspects of the private or public production of (social) housing, as it becomes equally defensive and internalized.



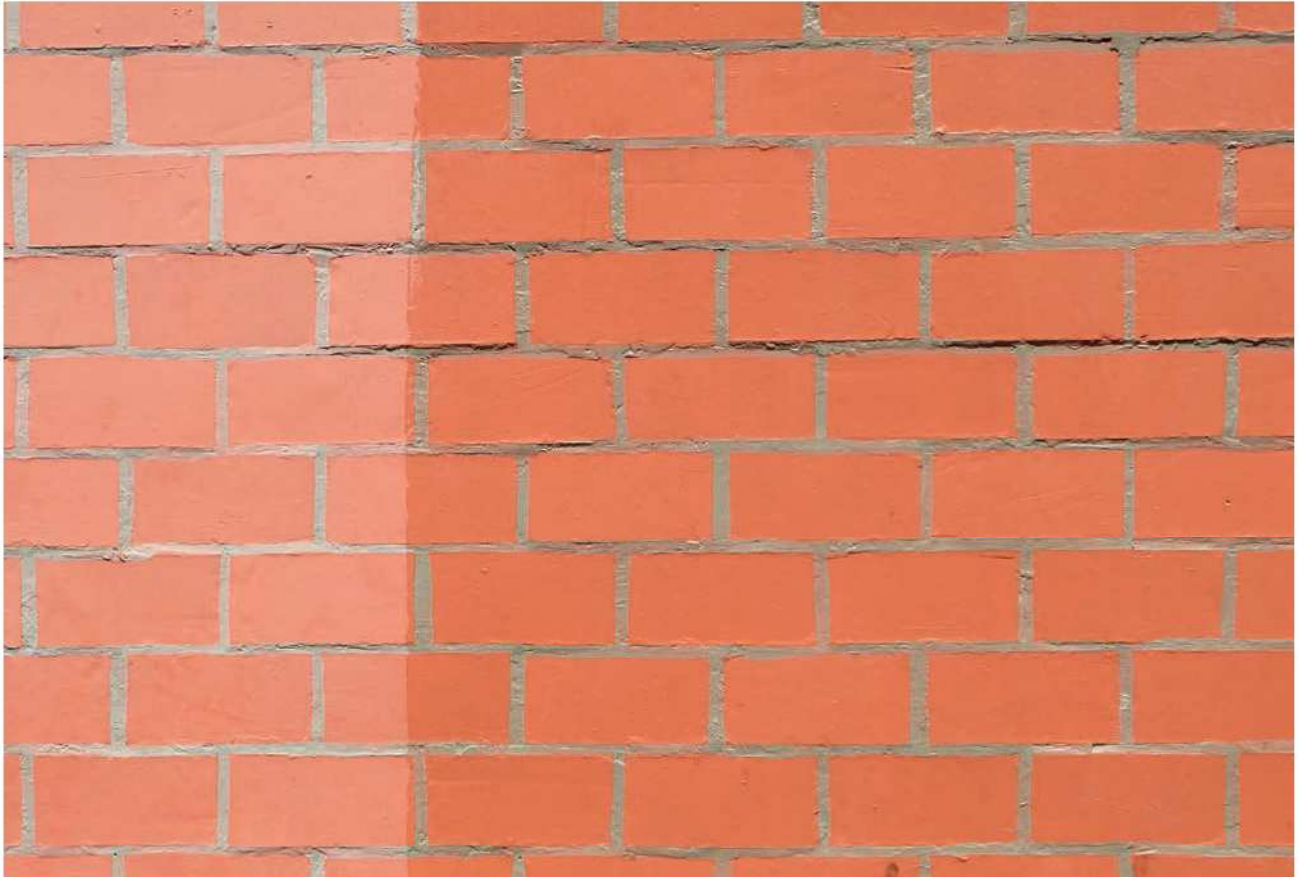
WALLS FENCING COPROMO FROM ITS ENVIRONMENT (2015)



WALLS SURROUNDING COPROMO (2015)



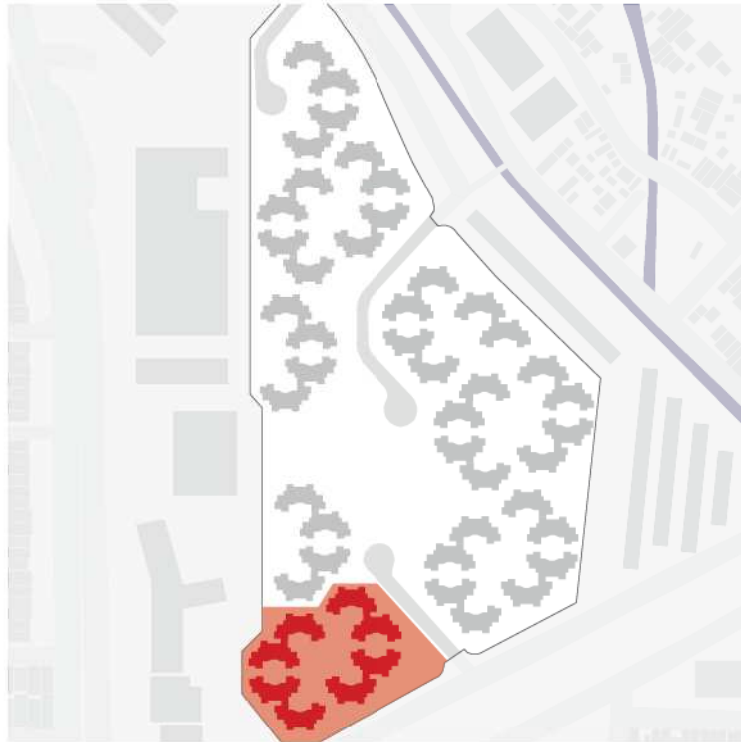
COMBINATION OF SELF-BEARING CERAMIC BLOCKS AND METALLIC STAIRCASES - THE INHABITANTS ARE OCCUPYING THE CIRCULATION SPACE AS EXTENSION OF THEIR APARTMENT (2015)



VISIBLE MASONRY OF THE WALLS OF COPROMO IN DETAIL (2015)

A NEW BUILDING TECHNOLOGY

The building technology behind the design was revolutionary at that time. Usina thought up a combination of self-bearing ceramic blocks and metallic staircases. This innovative solution would optimize and ease the works on the construction site. These ceramic blocks namely eliminate the need for beams and columns and have good thermal and acoustic performances. But also the use of metallic staircases presents its own list of advantages. The stairs are mounted before the masonry and thus, the stairs could be used during construction as scaffolding, helping to ensure the safe movement of workers and material across the different levels. The metal staircases are the only 'really demanding' technical installation, after this all construction works could be carried out manually without specific technical expertise or tools. The association decided, guided by Usina in this decision, to maintain the structural masonry visible, as an evidence or a symbol for the worker's hand in the built product. (Fieldwork: Germano, 2015)



FIRST GROUP - FENCE DUE TO ENSURING SECURITY BETWEEN DISTINCT PHASES OF THE PROJECT.



GRILLES AND INTERCOMS TAKING ALL KINDS OF SHAPES AND FORMS - RESTRICTING ACCESS TO ONLY THOSE WHO ARE RESIDENTS OF THE BUILDING IN QUESTION.

SCHEMES BASED ON FIELDWORK (2015)

ON RHETORICS AND REALITY | PARA RETÓRICA E REALIDADE

With a design and a terrain, the association was still waiting for funding for the purchase of building materials. In 1994, 160 families received financing from CDHU (p. 58) and were finally able to start the real works on the construction site. Another 300 families decided to wait no longer and started building with their own resources. They received the name '*grupo dos por conta*' - meaning as much as 'group on its own'. Thirteen months later, also the last 540 families received financing from CDHU. This division in groups brought a lot of disagreements, problems and discussions with it and was also physical transferred to the site (Nazavinas, 2007).

Each family had to fulfil 16 hours of *mutirão*-work per week, without exceptions. Further, to ease the organization and the works on the construction site, the families were divided into 'task groups', ranging from electrical to carpentry to kitchen teams (Oyola, 2007). Meanwhile, housing movements were gaining victories in the participatory budgeting policy, forcing CDHU to triple¹ the percentage that could be used for the payment of contracted labour. This achievement empowered the families with more financial freedom and the ability to contract companies for technically more demanding tasks, the families could even contract companies to work on weekdays (Oyola, 2007; Rolnik, 2004). Gradually, the strong belief in *mutirão* as an inherently 'auto-constructed' project started to shift to more pragmatically feasible combinations of self-construction and contracted professional work. This enabled the families to move beyond *mutirão* and its concerns of actual building while keeping in charge of the decision-making process through *autogestão*. *Mutirão* and *autogestão* were altering and disputes about their respective value became a major concern of both social movements and *assessorias técnicas*. (Rolnik, 2004)

For the '*grupo dos por conta*' the hiring of labour or skilled labour was rather exceptional. Instead, a few *mutirantes* followed courses and passed their knowledge on. Everything that could be done was done by the *mutirantes* themselves. (Oyola, 2007)

By the time the 160 CDHU-financed families were finished, the other groups had barely properly started with the works. An empty construction site at night was considered dangerous and could pose various risks. Therefore, the first group felt the need to fence their part, establishing a safer place for their families. What started as a way to

ensure security between distinct phases of the project, unfolded in an administrative separation. The first group turned away from the association and defined its own syndicate with own rules, gatherings and administration. (Oyola, 2007)

Eventually, due to the interference of CDHU and court order, the fence had to be demolished and the condominium had to be re-established as a whole as originally planned. While the fence was being torn down, the contrary happened in the other part. As all over the city, grilles and intercoms rose out of nowhere, restricting access to only those who were residents of the building in question. (Fieldwork: Germano, 2015; Nazavinas, 2007)

Although the fence separating the two phases might be demolished, the former division is still present. A large part of the 160 CDHU-financed families rather park their car - out of ease or principle - within 'their' lot, refusing to use the communal parking lot like the other inhabitants of Copromo. Furthermore, only within this 'neighbourhood', the *mutirantes* found the spirit after the completion of their condominium to upgrade their communal courtyard with benches, a barbecue, trees, and flowers. A different atmosphere with more cohesion and stronger community spirit still prevails here and prevented the installation of grilles and intercoms. (Fieldwork: Germano, 2015)

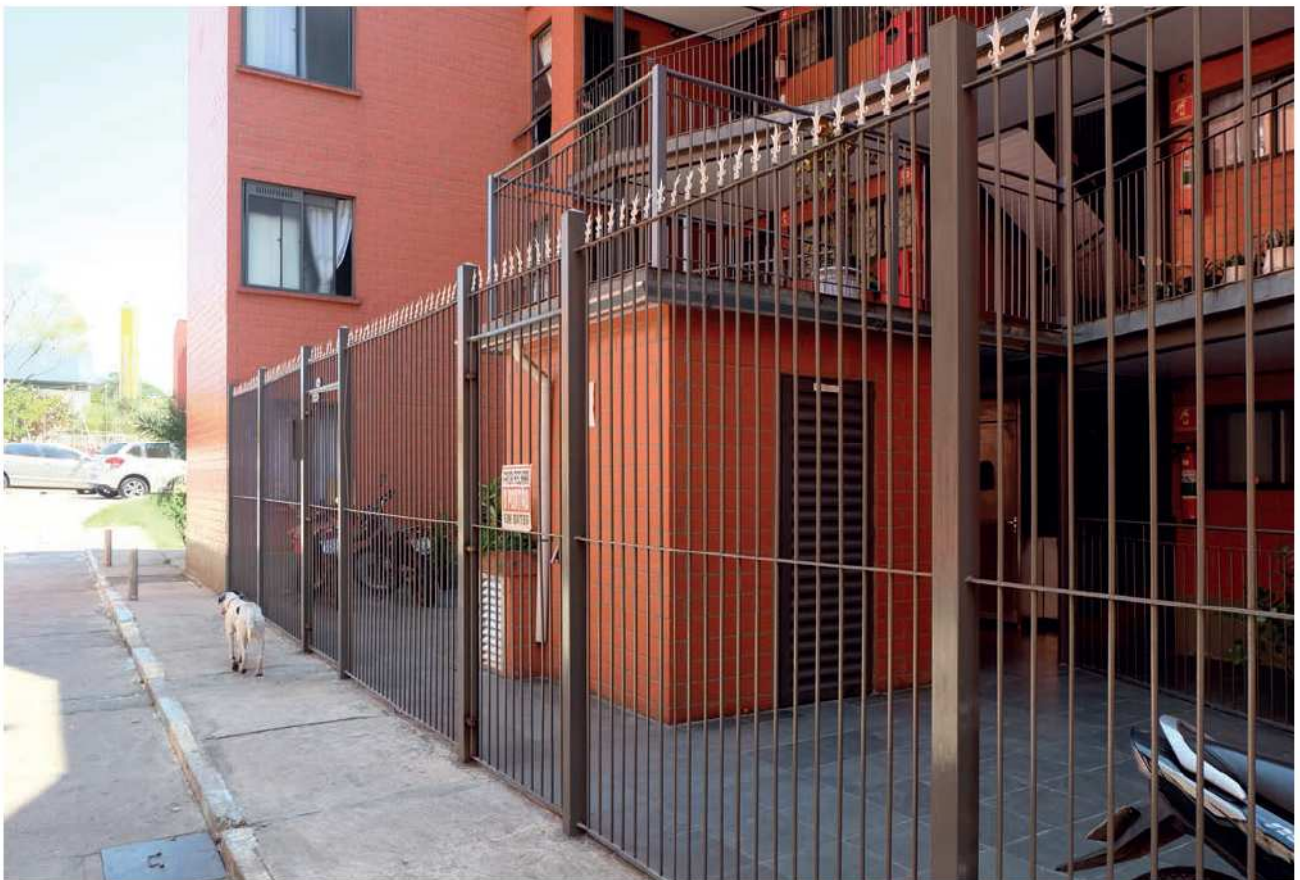
Against a backdrop of gradually consolidating democracy and in an architecturally experimental, the *mutirão* Copromo started as an innovative project. Through partnerships and negotiations with the City Hall, *mutirão* Copromo could be seen as valuable experience in building and strengthening citizenship, struggling to surpass conventional methods and showing that the low-income population can take matter into own hands.

Nonetheless, the waiting, the disappointments and the inherent difficulties that arose during the process often turned dreams into harsh reality. The collective ideology of *mutirão* ran up against barriers and the widespread tendency to protect and privatize infiltrated former communal ideas. The architectural outcome didn't match the initial aspirations and concepts, but on the other hand, which architectural or urban project does? What became clear instead is the significant experimental liberty embedded in the complex history of *mutirão*. It becomes readable that every project, like Copromo, is very much an architectural and social laboratory in itself, where the eventual outcome is the result of multiple negotiations and compromises. In any case, to refer to Turner (1976) again, *mutirão* is without doubt 'housing as a verb', and not a clear-cut universal standardized 'solution' answering to a given quantitative 'deficit' (Turner, 1976, p. 97).

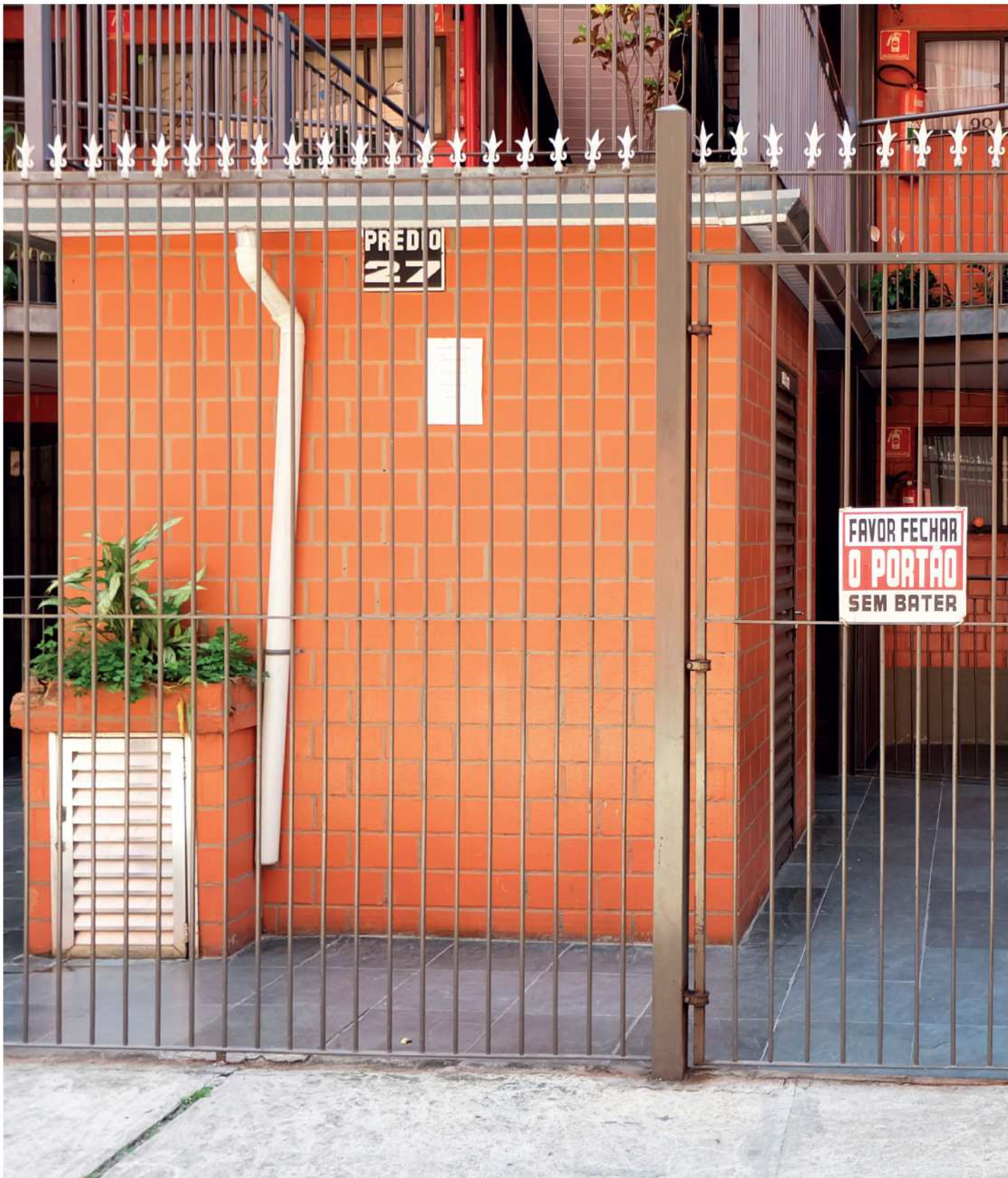
1 In the beginning of Erundina's administration, 10% was allocated for the contracting of labour. Under the pressure of social movements, CDHU tripled this percentage, up to 30% (Rolnik, 2004).



FIRST GROUP - COMMUNAL COURTYARD WITH A DIFFERENT ATMOSPHERE, A SENSE OF COHESION AND STRONGER COMMUNITY SPIRIT (2015)



GRILLES AND INTERCOMS - RESTRICTING ACCESS TO ONLY THOSE WHO ARE RESIDENTS OF THE BUILDING IN QUESTION (2015)



"FAVOR FECHAR O PORTÃO SEM BATER" - PLEASE CLOSE THE DOOR WITHOUT HITTING (2015)



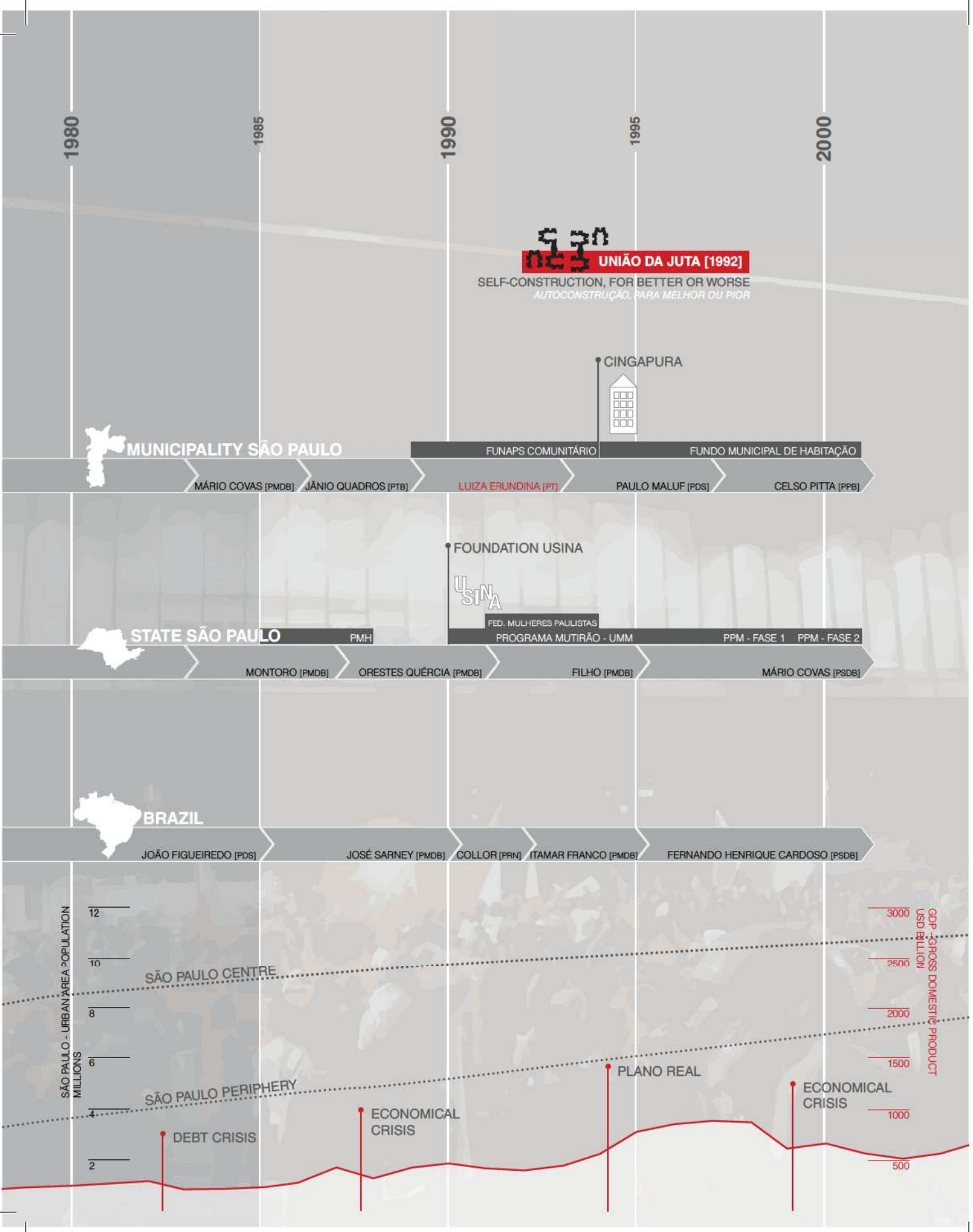


UNIÃO DA JUTA [1992]

SELF-CONSTRUCTION, FOR BETTER OR WORSE | *AUTO-CONSTRUÇÃO, PARA MELHOR OU PIOR*







THE OTHER POSSIBILITY | A OUTRA POSSIBILIDADE

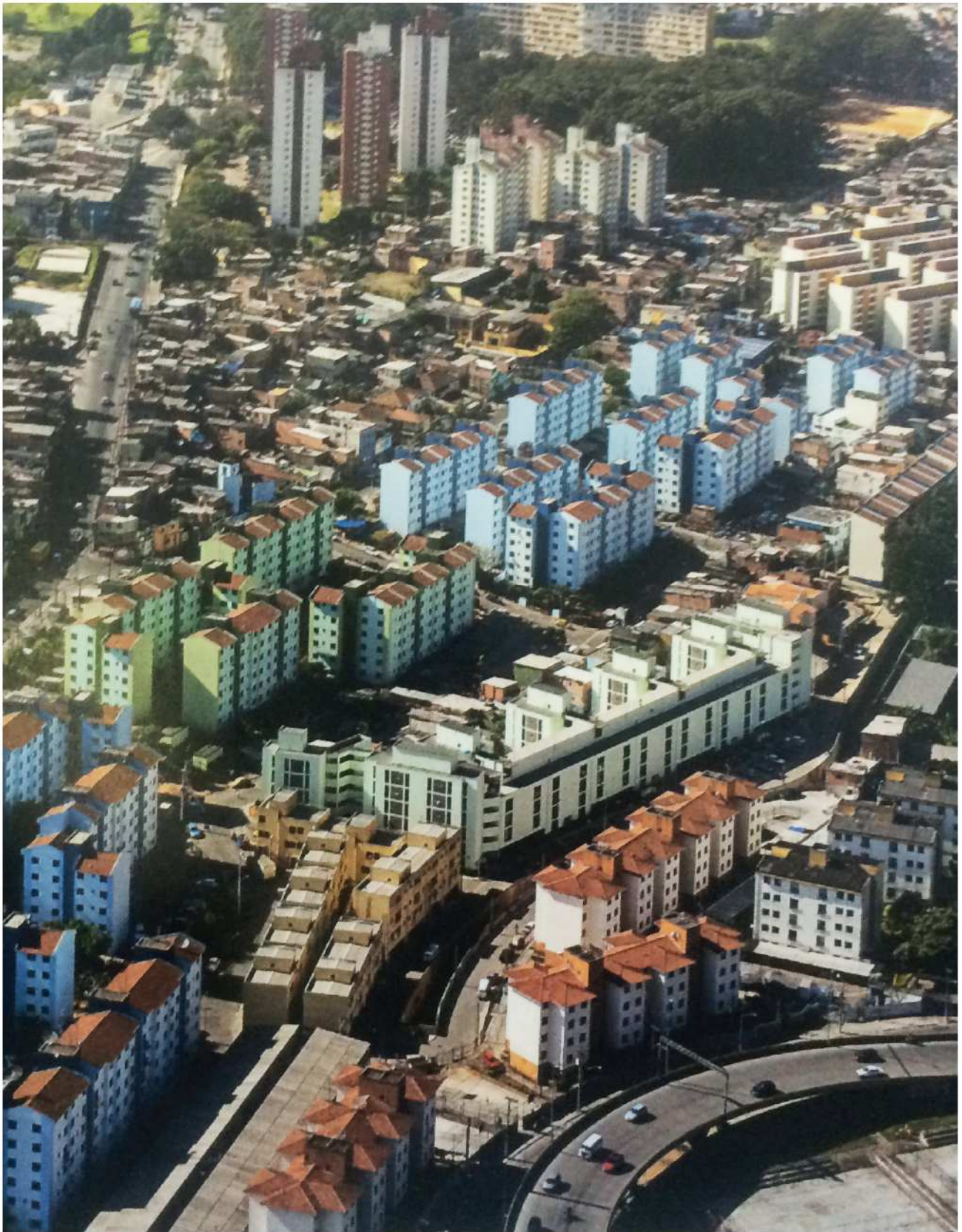
FROM SLUM REMOVAL TO SLUM UPGRADING, AND BACK TO SQUARE ONE - As the interest in *mutirão* was culminating in the context of Copromo, governmental actions were analogously taken regarding favela-upgrading as a more top-down attempt to improve the lives of the underclass.

The rapid growth rate of *favelas* in São Paulo dates back to 1980 and initially these *favelas* were characterized as densely packed informal settlements made of wood, cardboard, corrugated iron and other makeshift materials. (Hill, 2005) But when time passed and enough money was saved, the families were able to expand and rebuild, consolidating their houses, to legalize settlements and provide services. The first *favelas* in the seventies were not at all seen as an incentive for real integration into the city. It was a phenomenon that resulted from immigration and was therefore regarded as 'provisional'. In this point of view, training plans, alphabetization programmes and professional formation were established to improve and accelerate the integration process. The fixing that during the eighties 30 to 40 percent of the *favelas* came from the legal city, changed that idea. A significant change of mentality occurred and the idea of precarious housing as temporary housing passed to another mind-set in which

the settlement could exist for a long time. Concerning the fact that people urge to remain in their living environment, the government took care of large-scale improvement in *favelas* going from slum removal to slum upgrading, which is still going on. (Padía & Rebelo, 2012; Pasternak, 1995)

Governmental actions to tackle slum housing mainly consisted of a sequence of attempts, including the erection of a federal bank, followed by state-level companies to provide low-cost housing and finance slum upgrading projects. Later on, these companies resulted in the foundation of a Housing Development Company (COHAB), which initially sought to develop housing for limited-income families, and evolved in a municipally managed COHAB for the construction of social housing, which also funds self-help projects (Mutirões).

Before the 1980s, housing units were mostly built or upgraded by COHAB (p. 58), but because of cutbacks of federal and state level funding, public housing became a concern of the municipality. Unfortunately, the municipality had its own financial problems whereby only less than 6,000 housing units a year were provided since then. (Hill, 2005)



MONOTONOUS SINGAPORE BLOCKS WITH VERY SPECIFIC H-SHAPE (SOURCE: FABIO KNOLL, 2012)

THE RISE AND FALL OF PROJETO CINGAPURA

As mentioned in the previous chapter, *"the progressive government of Erundina dealt with social housing and her mandate was marked by four years of important achievements. However, in 1993, the new conservative mayor Maluf put great energy into weakening the housing movements linked to the PT. Maluf's main tactic was to cut the funds that were made available for cooperative building projects."* (Rolnik, 2004, p. 12)

Maluf searched for a more 'spectacular' solution in order to remedy the housing deficit and his government came up with an ambitious slum verticalization plan, based on the experience of Singapore. The standardised complexes of project Cingapura began to arise in 1994 and provided housing blocks next to or in the middle of slums. Soon the project developed to higher buildings because more housing had to be provided. The Cingapura blocks showed a very specific shape, introducing for the first time the shape of the so called H-block¹ which is still used today and has matured into a well-known term for ready-made social housing blocks. (Hill, 2005; Padia & Rebelo, 2012)

The construction of tower blocks re-housed the inhabitants of *favelas* and strong change of mind took place, shifting from the openness under Erundina with local and diversified solutions to a standardized '1 size fits all' housing solution. This conflicted with the fact that a lot of the inhabitants used to run a small-scale business on their former plot. This informal activity was often their only family income, but with the construction of the tower blocks, there wasn't any possibility for this kind of activities (Rolnik, 2004; Fieldwork, 2015). Of course, large organizations that wanted to provide adequate housing had to standardize procedures and products in order to operate economically, but this conflicted with the local and personal variety of housing priorities. The widespread mistaken idea that a house of materially higher standards is intrinsically a better house, generated as well that the housing problem was misstated (Turner, 1976). *"Market values are, of course, different from human values.(...) Real values are those that lie in the relationships between the element of housing actions - between the actors, their activities and their achievement."* (Turner, 1976, p. 97). This in combination with the rents that had to be paid, although these were set modestly, burdened many families. Families had to move out and new *favelas* were welling up in other places (Hill, 2005). *"The Cingapura project proved ineffective as a solution to the housing problem."* (Amaral, 2002)

Originally 100,000 units were planned by the Cingapura programme, but experiencing a range of problems, such as cutbacks of funding, escalated unit cost and occupations, the Cingapura project ended earlier with a final amount of 14,000 units. (Hill, 2005)

As the main focus was on the Cingapura programme during this period, there was less attention for *mutirão* projects led by social movements. These initiatives therefore suffered many problems to gain funding and be executed. (Arantes, 2002)

¹ Ready-made social housing block with an H-shaped floor plan. These buildings most often consist of four floors with a standard typology of 43 m² defined by CDHU. The H-shape is represented by two identical linear buildings deployed in parallel and connected by stairs that offer the vertical circulation and give access to the apartments.

PLANO REAL

On the federal level, Franco took control as president of Brazil in the beginning of the nineties, when Brazil was in the middle of a deep economic crisis. Inflation had never been so high and almost reached 2.4% in 1993 while Brazil was hitting rock bottom. A new economic plan was needed to put the country back on its feet and the roots for the Real-plan were already set by the neo-liberal Cardoso as minister of economics. Following this plan, a new currency was introduced in 1994 as a successful attempt to stabilize the Brazilian economy and end the inflation. (Ito, 1999)

The Real-plan attracted a lot of investors and foreign money fled to the country, continuing through Cardoso's re-election in October 1998. Nevertheless, a lot of investors lost confidence in Brazil's overvalued currency and pulled out. Brazil was no longer able to defend its currency by using dollar reserves to prop up the Real and let its currency float free. The Real nosedived. (Ito, 1999)

As the country's largest city and economic epicentre, São Paulo was affected by the national-level policies. *"The city was one of the areas that was hit worst by the Real Plan (...) the program led not only to economic decline, but also to an increase in social inequalities related to the loss of*

employment, especially in the manufacturing industry." (Rolnik, 2004, p. 5) As a result, the number of people living in *favelas* increased significantly between 1994 and 1998. (Rolnik, 2004)

PROGRAMA PAULISTA DE MUTIRÕES

While the Real plan was active on federal level, trying to revive the Brazilian economy, the focus on social housing continued on state level. Mario Covas became governor of São Paulo and together with his government he installed a new social program in 1996.

After 7 years of the implementation of the programme *Funaps-Comunitario* (p. 58) by the city of São Paulo, PPM - *Programa Paulista de Mutirões* (p. 58), which promoted the construction of housing by mutirão, was instituted by the State Law no 9.142 on March 9th, 1995. Managed by the Housing Development Company from São Paulo State (CDHU), both the new programme as well as the Mutirão Programme UMM (p. 58) of the previous management were to promote housing construction and self-management in partnership with community associations, mainly directed at families with an income from 1 to 10 minimum wages. (Ikuta, 2013, p. 70 - translated by author)



MUTIRANTES DURING THE CONSTRUCTION WORKS OF UNIÃO DA JUTA (SOURCE: USINA)

The mutirão União da Juta, located in Fazenda da Juta, São Mateus (East zone of São Paulo), started in 1991 in the context of the municipal administration of PT (p. 58) and while Brazil was affected by a deep economic crisis. A number of families, originating from the eastern region of São Paulo, took matters into their own hands in a quest for adequate and affordable housing. The mutirão project was supported by Usina and funded by PPM (p. 58).

Since the start, both design and implementation were produced by Usina, hired by the social movement MST Leste¹ (p. 58). Through the provision of a self-managed process, Usina took control of the work and entrepreneurship, discussing the project with future residents (Ikuta, 2013). On June 24, 1992 the construction contract for a mutirão was signed, amongst CDHU (p. 58) and the *mutirantes* (p. 61) of the Association of União da Juta.

Nearly one year after signing the contract, there still wasn't any response from the governmental agencies, so the families decided to 'get on the ground' and to begin the works without the authorization of CDHU (p. 58). A few days later the official start for mutirão União da Juta was obtained. (Ikuta, 2013; Fieldwork: Isabella)

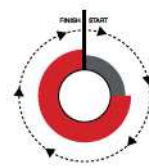
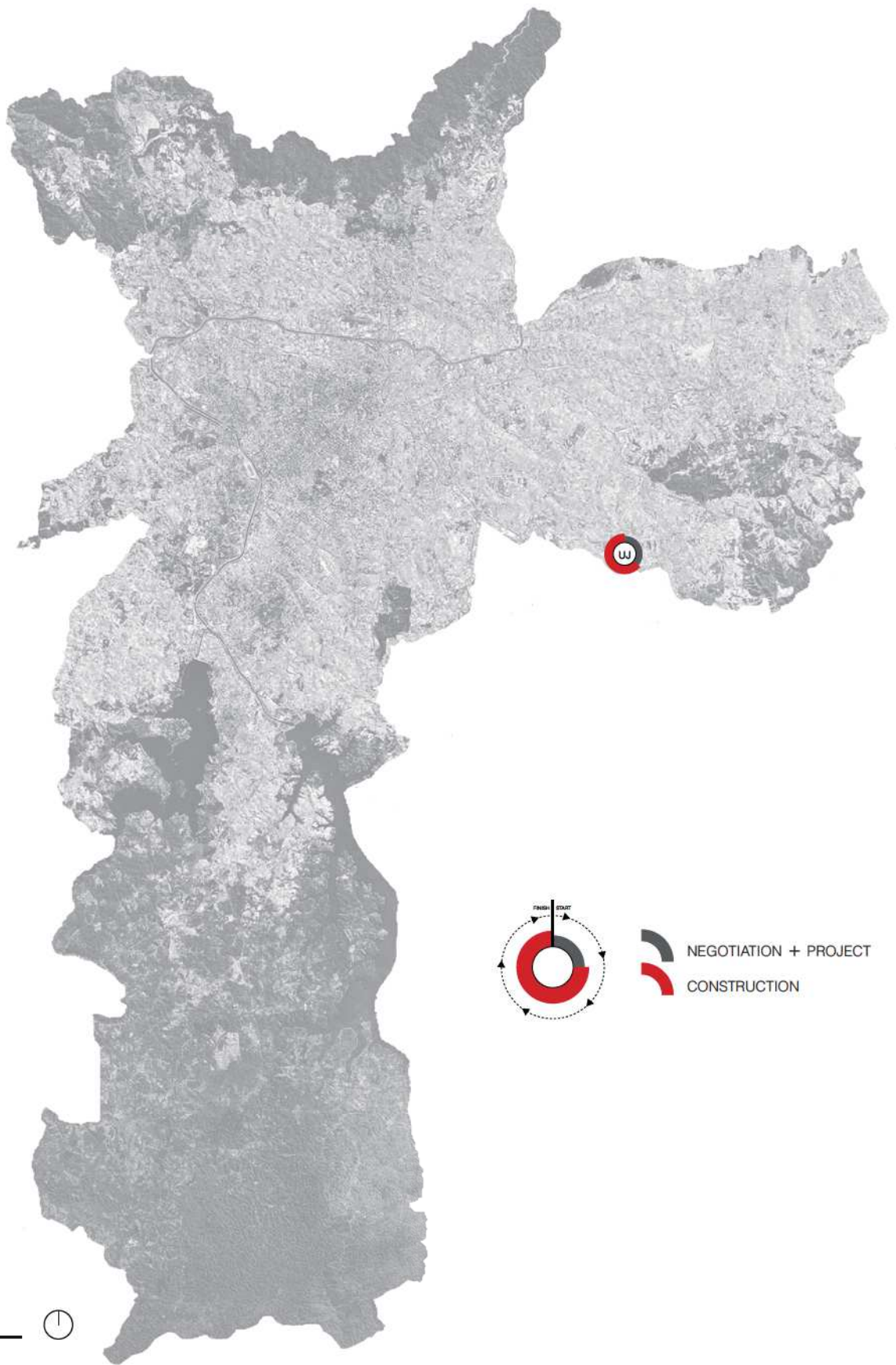
Also, this mutirão project experienced many problems during the construction phase (e.g. rainfall and consequent delay in earthworks), but the most important difficulty was the end of the collaboration with Usina before the completion of the works. It was a manoeuvre by the state government through CDHU (p. 58), pressing the residents

to choose between the provision of funding or staying with their *assessoria técnica* Usina without governmental support. The families depended strongly on funding, not having much choice than to end their collaboration with Usina. (Ikuta, 2013)

However, CDHU (p. 58) encountered numerous difficulties, not able to match up the challenges. Therefore, by strong pressure from the association of the residents, it was decided that the *assessoria técnica* Usina could return after a few months to finish the work.

The *mutirantes* worked on the construction site during weekends, contributing 16 hours a week. They attended assemblies, elected coordinators and managed the work. This target public knew what it wanted, but not how to build and that's where Usina would provide the necessary support. (Nakashigue, 2008)

At the end of 1998, the inauguration of União da Juta was finally there and was celebrated with an inauguration festivity. The *mutirantes* (p. 61) decided not to invite the politicians with their 'paternalistic' intention, because the residents were very aware that the mutirão was only achieved due to their own perseverance and capacity, supported by the pressures and mobilizations of social movements (Ikuta, 2013; Fieldwork: Isabella, 2015). Eventually the victory from then could result in a huge amount of self-managed mutirões in Fazenda da Juta nowadays.



NEGOTIATION + PROJECT
CONSTRUCTION

4 KM





UNIÃO DA JUTA



1992-1998



SÃO PAULO, SÃO MATEUS, FAZENDA DA JUTA



160 FAMILIES



MST LESTE 1



CDHU: PPM



USINA



SELF-BEARING CERAMIC BLOCKS
METALLIC STAIR CASES



1H40 TO SÃO PAULO CENTRE



16 307 M²
EVEN TOPOGRAPHY
FLOOR AREA RATIO: 0.68



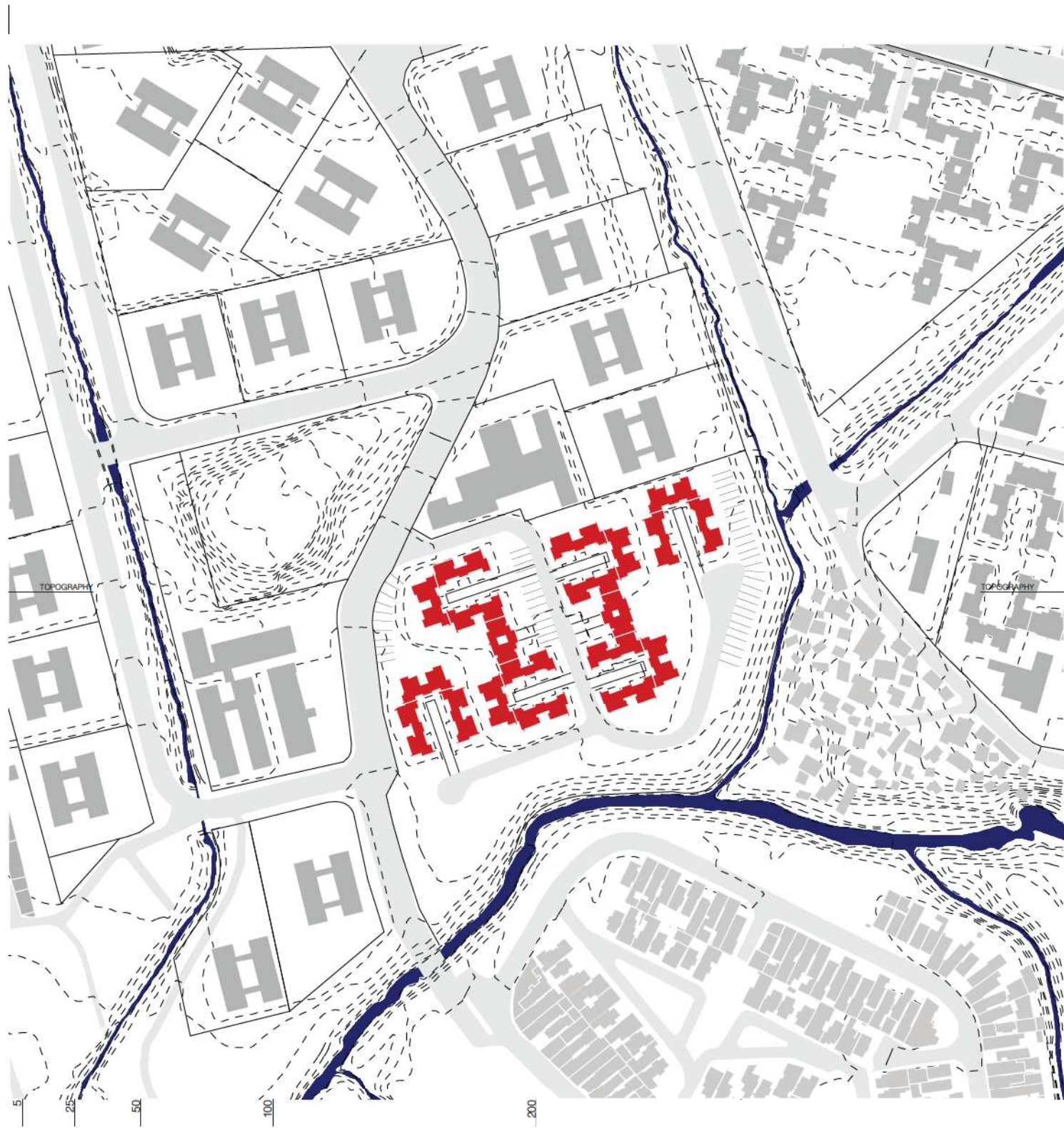
59 M²
4 FLOORS
98 UNITS/HA



PARKING COEFFICIENT: 0.34
54 PARKING SPACES



ADDITIONAL PROGRAMME: DAYCARE
AND COMMUNITY CENTRE



TOPOGRAPHY

UNIAO DA JITA

LOW RISE

HIGH RISE

RIVER

TOPOGRAPHY



MAP OF UNIAO DA JITA, EDITED BY AUTHORS. MAP BASED ON GOOGLE EARTH AND GEOSAMPA. SLOPE BASED ON GEOCONTEXT

FAZENDA DA JUTA - A TWO-FOLDED DISTRICT

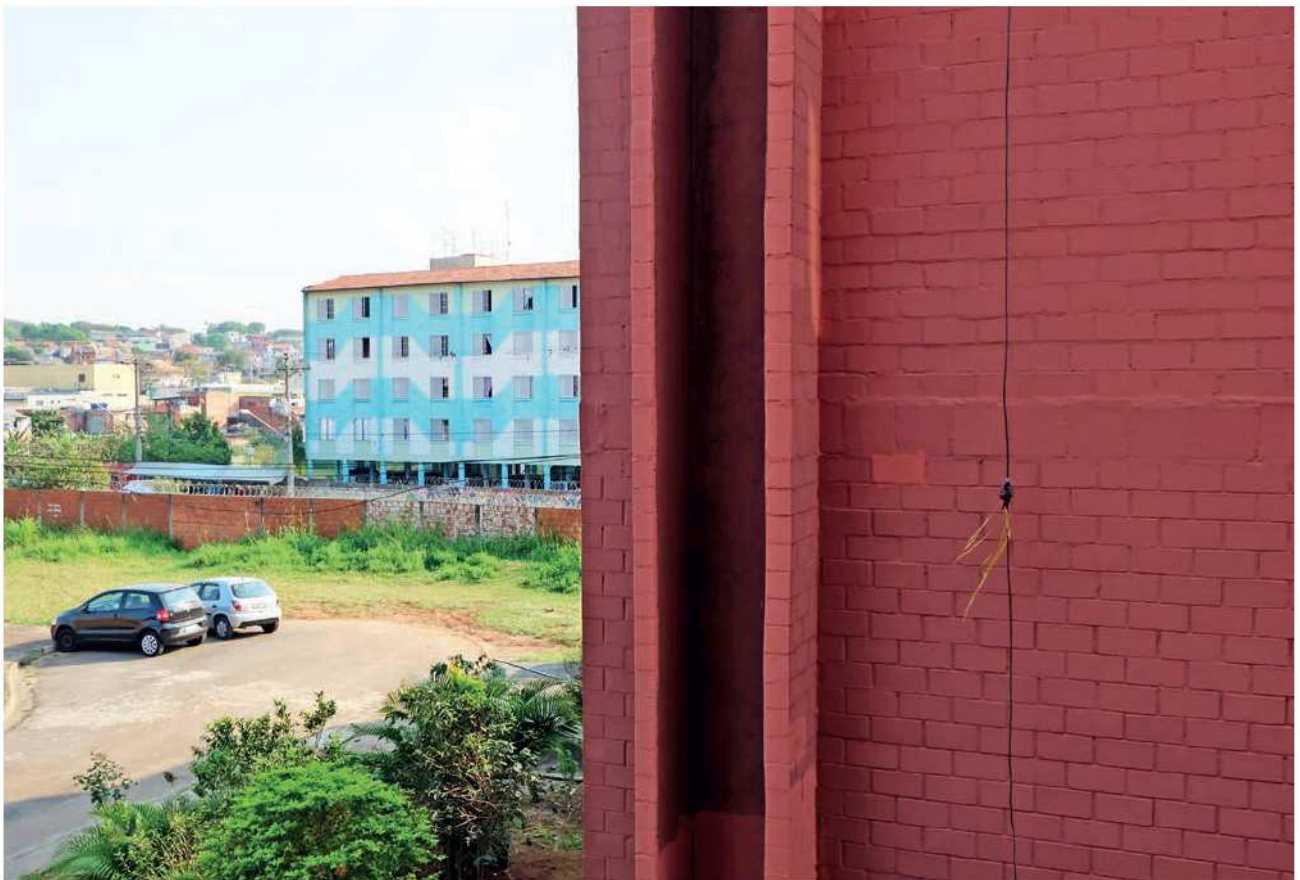
In the present-day situation, the project of União da Juta is located in a twofold district that generally consists of 2 typologies dominating in many outskirts of São Paulo. On the one hand a lot of one and two-story leftovers of *favelas* characterise the environment; on the other hand, the region is marked by a concentration of public housing, the so-called 'H-typologies' provided by CDHU (p. 58). (Nakashigue, 2008; Ikuta, 2013)

União da Juta was the second mutirão that started in Fazenda da Juta, which used to be a huge empty land in the east of São Paulo in the late eighties. In those days, the owners of the land were waiting for its real estate valuation, but successive occupations of the area led to its expropriation for social use. These occupations started at the turn of the eighties to the nineties and were promoted and organized by social movements such as MST Leste 1. (Fieldwork: Isabella, 2015)

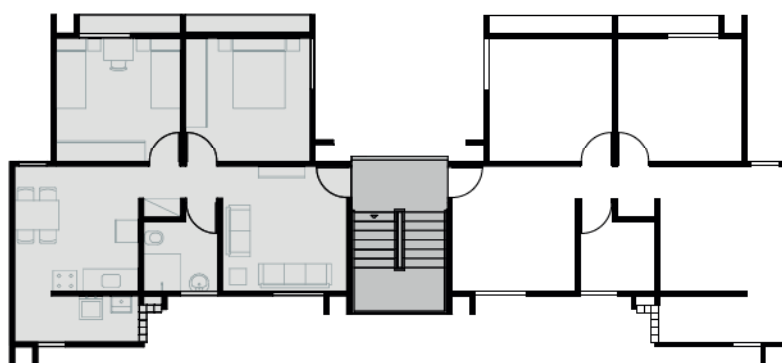
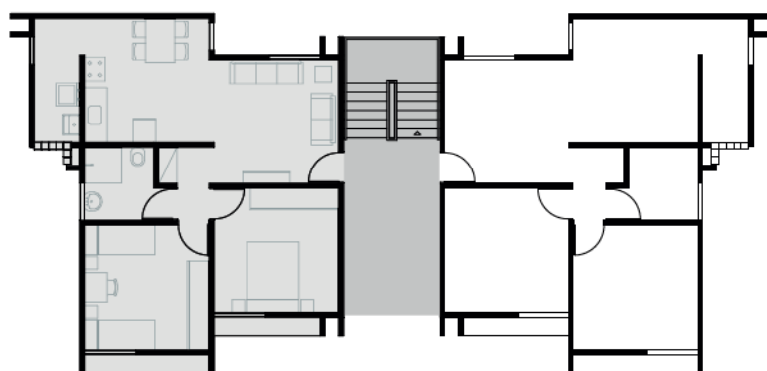
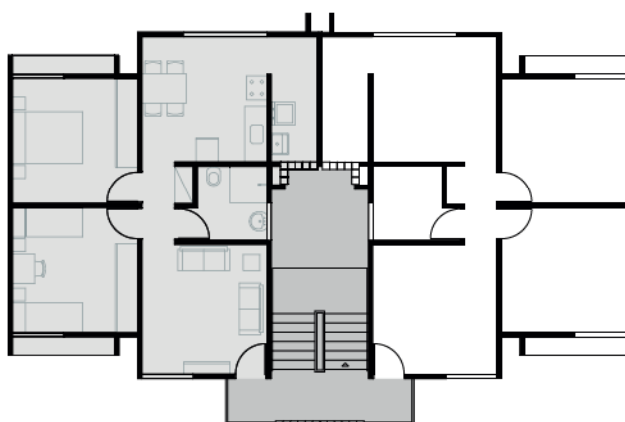
After lots of occupations, no action was taken by the government. The acquisition of the land still asked for a deep struggle: severe demonstrations, even more occupations and negotiations between social movements and the government. The perseverance of the families eventually caused the governor to meet their demands, with earthmoving notice of the release of the plot in Fazenda da Juta. The government disclosed in total 561 urban lots for construction of houses by self-managed mutirão. Finally, in February 1988, the parties finally concluded and a plot in Fazenda da Juta was achieved. (FUCVAM - website; Ikuta, 2013; Fieldwork: Isabella, 2015)



TWO-FOLDED DISTRICT OF FAZENDA DA JUTA (SOURCE: GOOGLE EARTH)



THE VIEW FROM A WINDOW IN MUTIRÃO UNIÃO DA JUTA ON TWO-FOLDED FAZENDA DA JUTA WITH GENERIC SOCIAL HOUSING BLOCKS AND CONSOLIDATED FABRIC IN THE BACKGROUND (2015)



UNIÃO DA JUTA: PLANS AND SECTION

4 M

EDITED BY AUTHORS, BASED ON PLANS AND SECTIONS OF USINA





ELEVATED GROUND-FLOOR OF UNIÃO DA JUTA (2015)



INHABITANTS OF UNIÃO DA JUTA (2015)

A 'LIFTED' DESIGN

União da JUTA has a total of 160 units, arranged in 20 blocks that are grouped in sets of three. The grouping of blocks proved to be very interesting because it eliminated the extensive interior corridors on existing large housing estates.

This arrangement of buildings allowed the formation of courtyards for the movement of pedestrians, access to housing and leisure. According to Arantes (2002), *"the buildings are articulated with each other, forming sometimes more private spaces such as small villages' access. This arrangement is more open, creating a little urbanity that can be found in housing."* In this sense, the proposal to lift up the buildings, bringing them to 1.50 m from the external floor level, allowed the formation of courtyards, physically surrounded by buildings but only visually connected to the apartments. The raised floor also enabled a separation for the single-story housing units, ensuring greater privacy and security. (Usina, 2014)



METAL STAIRS WITH LOADBEARING MASONRY (2015)



VIEW ON THE INNER COURT OF UNIÃO DA JUTA (2015)

THE IMPERFECTION OF THE CONSTRUCTION

The architectural design of the *mutirão* had innovative technological solutions for the affordable housing construction sector. A novel hybrid construction system with metallic stairs, that Usina had used for the first time in the design of Copromo, was used to meet the same advantages. (Ikuta, 2013; Usina, 2014)

Residents and *assessoria técnica* stated that the decision to leave the ceramic block visible raised a discussion about the work among the participants of the *mutirão*. For them the visible material dispensed the additional work of finishing the built walls, providing maximum utilization of the advantages of this type of material. In addition, according to Arantes (2010), the visible block also left an example, that this work was the fruit of an intense collective work of the residents themselves. (Nakashigue, 2008)

Although leaving the blocks visible was an intentionally decision, it can be seen that the present-day situation is no longer the same. Many inhabitants have plastered and painted the outer walls, probably because they wanted a cleaner look for their house that does not show the imperfections and shortcomings of their collaboration. (Fieldwork, 2015)



COLLAGE FRONT DOORS SHOWING INDIVIDUALITY (2015)

VARIATION AND IDENTITY

For the design of the housing typologies, it was considered important to have a typological diversity to represent the heterogeneity of family groups and the different modes of use, seeking to match individual needs with the collective (Usina, 2015). Endeavouring to reach this goal for diversity, the layout of União da Juta resulted in three different housing typologies that were collectively defined with the locals. Special attention was paid to the design of the areas of housing units, considering the average number of components in families to be met (Ikuta, 2013). The housing units approximately reach an area of 60 m², contrasting with the absolute minimum of 44 m² in CHDU-projects. This significant difference in size forms the main reason why the *mutirantes* engage in a *mutirão* project.

As *mutirão* was promoted as the alternative solution for social housing, it is noteworthy that also the typological variation, however small, is in contrast with the social housing projects made by CDHU (p. 58). This small diversity is even noticeable on the smallest scale, taking the front doors as an example. Every family was given the opportunity to choose their own front door. As such, no front door resembles another resulting in the fact that each dwelling, just as each family is different and has its own identity.

Usina tried to venture beyond borders. However, because *mutirão* is subject to many restrictions and regulations, the intended diversity can only be represented on the smallest scale: within the individual unit. Each housing type consists of a cluster of four basic modules: living room, circulation, and bathroom; kitchen and laundry, two dormitories. The grouping of these modules form larger modules that can be grouped in different ways that resulted in a composition of different typologies ensuring small diversity. Such modulation also made concentration and reduction of internal circulation area possible.



COMMUNITY CENTRE ADJACENT TO MUTIRÃO UNIÃO DA JUTA WITH DAY-CARE FOR TODDLERS, KIDS AND ADOLESCENTS (2015)

The region in which União da Jata is located has, as most peripheral areas of São Paulo, a lack of services and facilities. Upon a story of liberation and emancipating *mutirantes* to make their own choice, the *mutirantes* of União da Jata took matter into own hands and provided a few of these necessary services and facilities for themselves and for the neighbourhood within their *mutirão* project.

Considering the liberty inside *mutirão* projects that is reflected in the typological variation, as well as in the larger area of the units in contrast to the rigid standard solution of CDHU, União da Jata was also characterized by a call to additional facilities in addition to the minimum requirements of living. A few facilities were provided by the association of União da Jata such as a health centre, an elaborated public transport system and a community centre, including a day care centre and the headquarters of the neighbourhood association.

The community centre was also designed in collaboration with Usina and the construction started when the project of União da Jata was finished. The day care centre provides childcare for toddlers, and basic education and optional courses for kids and adolescents. It was not meant as a school, but rather as a centre for kids and youngsters when they are not at school in order to keep them 'off the

streets'. Each week the kids can choose two workshops they find interesting, such as break-dance, theatre or art. Adolescents can attend courses, ranging from informatics to preparations for job solicitations. The day care centre is not restricted to inhabitants of União da Jata, but open for all the children of the neighbourhood. (Fieldwork: Isabella, 2015)

Furthermore, the centre provides jobs for inhabitants of the area, creating a connection between União da Jata and the region. The headquarters of the association also took their seat in the community centre in order to work in a central location and to have influence on the day care centre because the young generation of kids and adolescents are seen as the future for this association. The prevalence of the association, representing the movement, is very noticeable. Next to following workshops the kids are involved in group discussions and specific activities are organized by the association. (Fieldwork, 2015)

Usina exploits the liberty within the *mutirão* project, however small, to the fullest. Many rules and regulations restrict the *mutirão* project. Larger apartments, small typological variations and the addition of little interventions that add urban quality are the main thrusts in a *mutirão* project.



COMMUNITY CENTRE WITH DAY-CARE FOR TODDLERS, KIDS AND ADOLESCENTS (2015)





THE KITCHEN TEAM PREPARES MEALS FOR ALL THE CHILDREN, ASSURING THAT THE CHILDREN GET AT LEAST ONCE A DAY A HOT MEAL (2015)



TODDLERS IN THE DAY CARE CENTRE WITH A 4 O'CLOCK SNACK. (2015)



PLAYING KIDS DURING RECREATION TIME (2015)



BREAKDANCING UNDER THE COVERED PLAYGROUND DURING RECREATION (2015)



PAULO FREIRE [1999]

REVITALIZING MUTIRÃO | *REVITALIZAR MUTIRÃO*





1995

2000

2005

2010

2015



PAULO FREIRE [1999]

REVITALIZING MUTIRÃO
REVITALIZAR MUTIRÃO

PLANO DIRETOR



MUNICIPALITY SÃO PAULO

MINHA CASA MINHA VIDA - ENTIDADES
FUNDO MUNICIPAL DE HABITAÇÃO

CELSO PITTA [PPB]

MARTA SUPLICY [PT]

SERRA
[PSDB]

GILBERTO KASSAB [PSD]

FERNANDO HADDAD [PT]

STATE SÃO PAULO

PROGRAMA DE GESTÃO COMPARTILHADA

PPM - FASE 2

PRÓ-LAR MUTIRÃO ASSOCIATIVO

MINHA CASA MINHA VIDA - ENTIDADES

MÁRIO COVAS [PSDB]

GERALDO ALCKMIN [PSDB]

LEMBO
[PFL]

JOSÉ SERRA [PSDB]

GOLDMAN
[PSDB]

GERALDO ALCKMIN [PSDB]

CITY STATUTE



BRAZIL

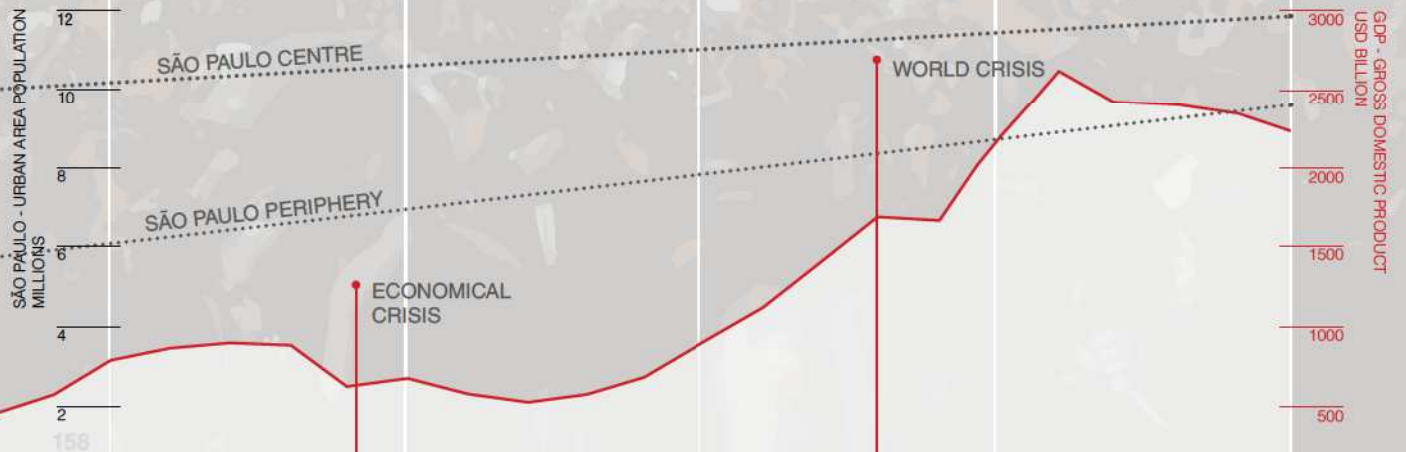
CRÉDITO SOLIDÁRIO

MINHA CASA MINHA VIDA - ENTIDADES

FERNANDO HENRIQUE CARDOSO [PSDB]

LUIS INÁCIO DA SILVA (LULA) [PT]

DILMA ROUSSEFF [PT]



2001 RED SÃO PAULO BIS

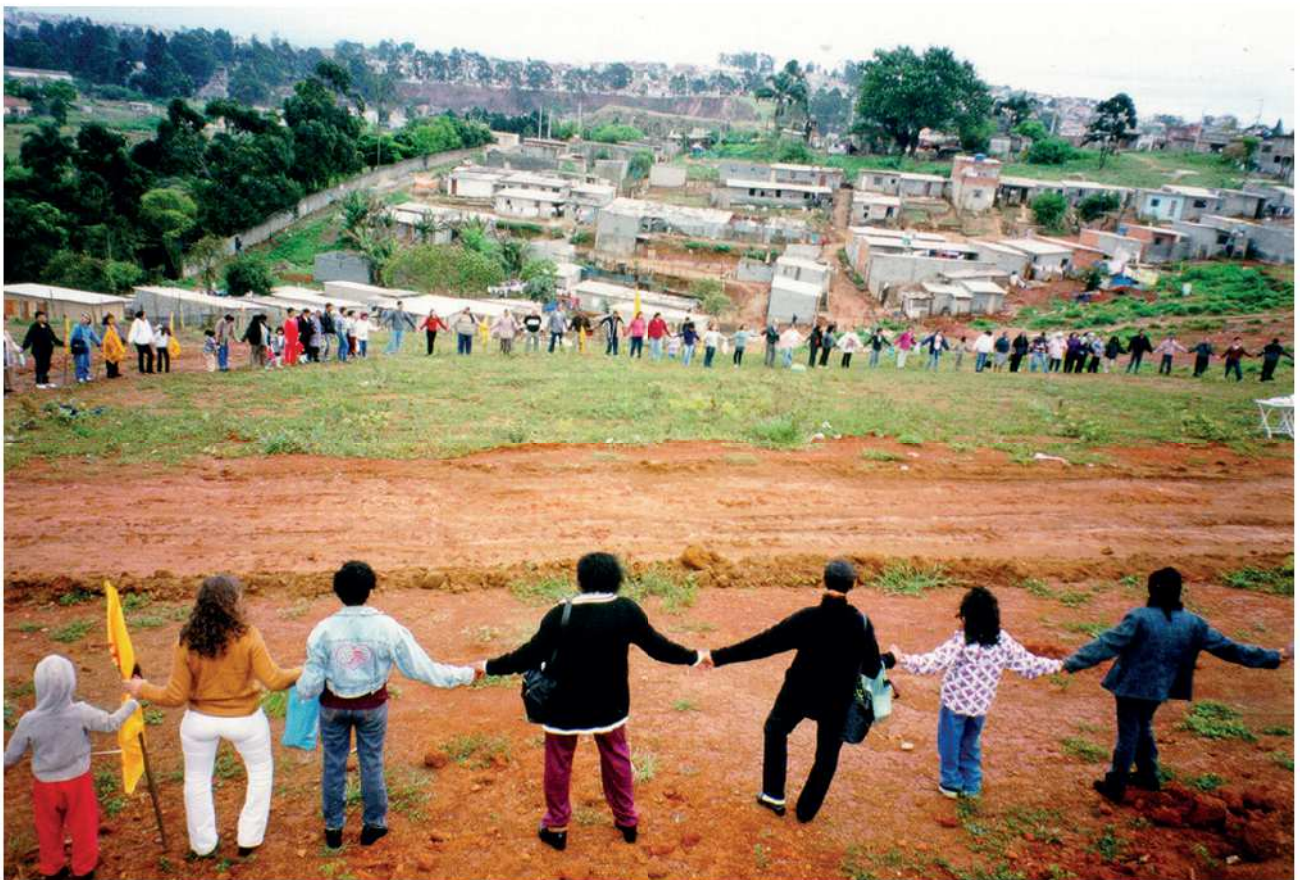
With the election of Marta Suplicy in 2001, São Paulo turned for the second time red. The PT's (p. 58) return to power created great expectations among the movements that a new housing policy would be established to give preference again to *mutirão* projects, as in the days of Erundina (Tone et al, 2011). Suplicy's government promised to spend \$R3 billion on social housing during her mandate (Ito, 1999). When Suplicy took office, São Paulo *"was in precarious financial condition, with almost no resources for investment"* (Rolnik, 2004, p. 15). A new strategy to obtain maximum housing for minimum cost was sought. The Cingapura programme, that was institutionalised and encouraged under her predecessors, Pitta (PPB) and Maluf (PP), was brought to an end, arguing that the cost of housing production through *mutirão* was only half of the cost for a housing unit in a Cingapura project. (Ito, 1999)

2001 CITY STATUTE

After the Urban Reform intentions expressed in the 1988 Constitution, a 13-year intense negotiation process followed among movements, real estate sector, municipalities, states and federal government institutions dealing with housing and environment about the contents of the law (Friendly, 2013). In 2002, an agreement was reached among the many stakeholders and the City Statute was proudly presented as the result. This formal incorporation of the 'Right to the City' into national law was unprecedented and unique (Mayer, 2012) and was called *"remarkable in the history of urban legislation, policy, and planning not only in Brazil but worldwide"* (Holston, 2008, p. 292).

The City Statute defined the general guidelines that had to be observed by federal, state and local governments, ensuring two main aspects of the right to the city; democratic city management and the social function of urban property and the city. The latter, social function, meant that collective interest should have priority over individual ownership right, and use value over exchange value, while democratic city management involved the planning, producing and governing of cities with social control and participation of citizens. (Friendly, 2013)

The City Statute included as well various instruments and tools for municipalities *"to use in combating social inequality, promoting the right to housing, and overall, in advancing the right to the city"* (Friendly, 2013, p. 163). One of the most important provisions in the City Statute is that cities with more than 20 000 residents are obligated to create a master plan, with the participation of citizens in order to enhance the democratization of the decision-making process. Another example is the institutionalization of ZEIS, providing areas closer to the urban centre with the necessary infrastructure and services for the low-income population and preventing forced evictions to peripheral neighbourhoods and areas of risk (Ministério das Cidades, 2009). *"In a context where the poor have often been pushed to the fringes of cities, this tool is an exceptional achievement"* (Friendly, 2013, p. 165).



"THIS LAND IS OURS NOW" - OCCUPATION OF THE LAND OF MUTIRÃO PAULO FREIRE(SOURCE: USINA)

OVERCOMING OPPRESSION | A SUPERAÇÃO DA OPRESSÃO

The story of mutirão Paulo Freire started in Cidade Tiradentes in August 1998 with the foundation of 'Associação de Construção Comunitária Paulo Freire'. The association was an assembly of 100 families out of 14 different base groups, all affiliated to MST Leste 1 and UMM. Mutirão Paulo Freire was named after the great Brazilian philosopher, sociologist and educator who campaigned to improve the educational level of the urban poor, proclaiming liberation. For liberation to have any meaning at all it needs to be rooted in educational practice, as a state of mind. In "Pedagogy of the Oppressed" he advertises that *"education is described as traditionally a tool of oppression, so effective that those whom it oppresses acquire the habits of thought and the values of the oppressors. The oppressed internalize the 'image of the oppressor'; they 'fear freedom' and therefore never achieve it; they participate, in other words, in their own oppression."* (Williams, 2009, p. 165). The power and knowledge of popular classes and the breaking with hierarchic schooling systems intrinsically expressed that 'we can all learn from one another'. Similarly, the mutirão considered the construction of housing not as the goal, but as a starting point for a pedagogical process of liberation. (Usina, 2014; Moreira, 2012)

To break through this idea of 'the oppressor' and take control, reaching for liberation, the association started to search for a terrain to elaborate their mutirão aspiration. This struggle was hard and as every pedagogical process, it went with as many ups as downs.

THE ACQUISITION OF LAND

After many rounds of negotiation, a part of the Inácio Monteiro block in Cidade Tiradentes was granted to the association. Inácio Monteiro was an area in Cidade Tiradentes preserved for social housing and was made to relocate families that lost their house due to 'public works'. Inácio Monteiro is in general subjected to an outmoded and segregationist vision of monotone, repeating dwelling blocks (Arantes, 2006).

Shortly after however, the assigned area was occupied and the dreams of the association were put on hold. Negotiations were re-opened and eventually, the City Hall reassigned a new lot to the association. The new lot was also located in Inácio Monteiro but was much smaller and had a very steep topography that would only complicate the future construction. (Usina, 2014)

With occupations worsening and negotiations with City Hall not advancing as rapidly as expected, the association feared to lose its terrain again (Arantes, 2006). Even in Cidade Tiradentes, far from the centre, in an area with lack of infrastructure and public facilities, it was a struggle for

land. In 2000, they entered the assigned area as a protest against the government's unwillingness and lack of political support. Usina made a design for a shed that could be easily and rapidly built with simple materials and the shed became the new meeting place for the association as it was provided with a kitchen and restrooms. Further, all necessary facilities for the terrain-keeper, who could guard the terrain by night, were integrated in the shed. After three weekends, their act of claiming was built. (Arantes, 2006; Moreira, 2012; Fieldwork: Das Dores, 2015)

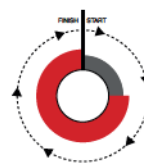
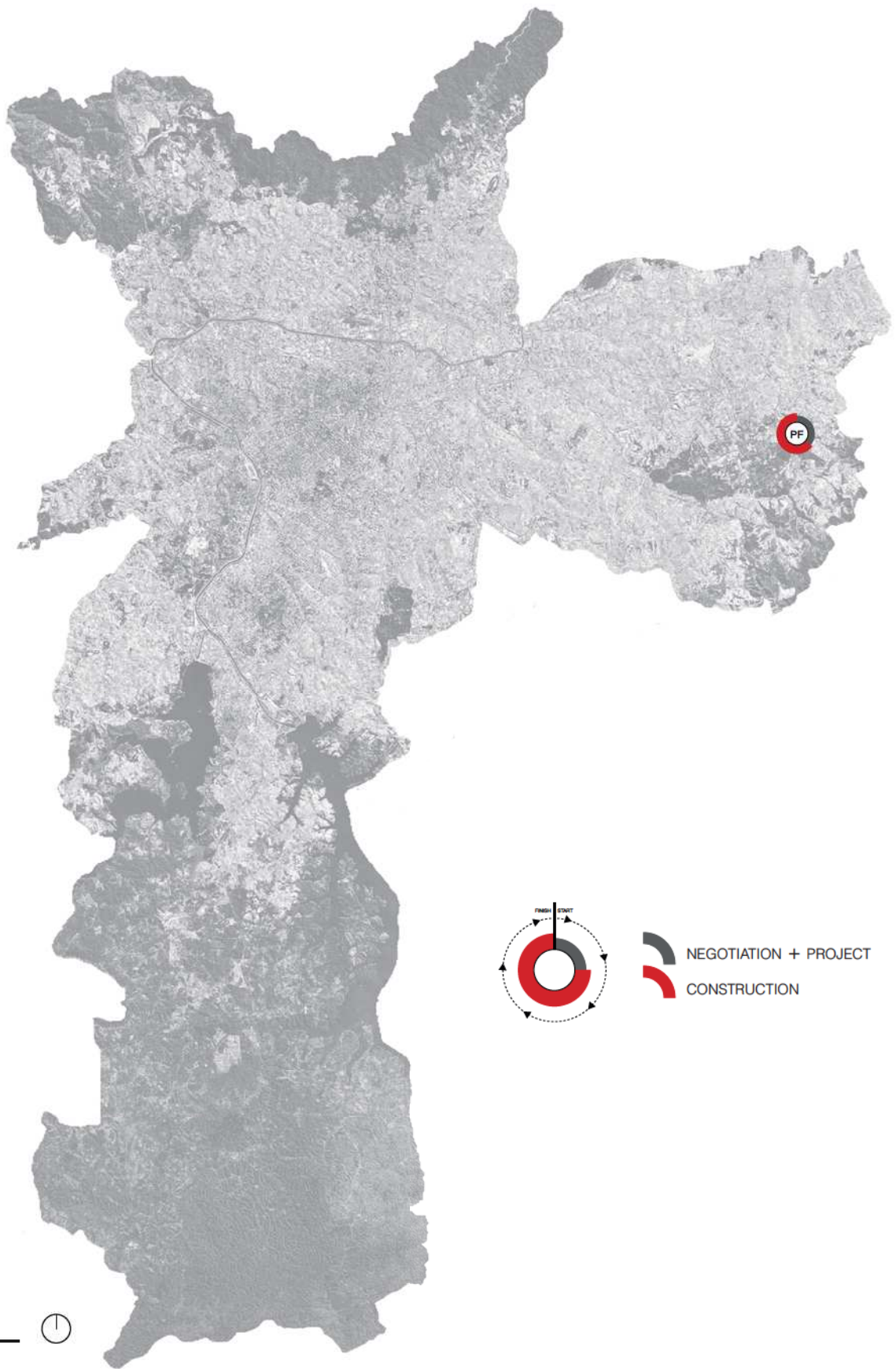
THE CHOICE OF PROJECT

With the land possession ensured, the next political dispute already awaited. City Hall namely restricted the association's freedom of choosing its own project and imposed Cingapura standard design measures. The association refused to resemble the monotone, repeating dwelling blocks that characterize the landscape of Cidade Tiradentes and retained to the idea that mutirão was a way to ensure participation in the decision-making process. The association Paulo Freire continued the negotiations, until they obtained freedom to build. (Usina, 2014)

THE CONSTRUCTION ITSELF

Between 1999 and 2001, the collective efforts of mutirão Paulo Freire and Usina were mainly focused on acquiring terrain and the freedom to build. With these steps achieved, the participative design process could be initiated and in 2002 mutirão Paulo Freire could initiate with the works on the construction site. These works were expected to be finished within two years and thus, before the end of the PT (p. 58) administration. Although, the actual construction took only one year and eight months, the entire construction process took eight years, from 2002 until 2010. (Tone et al, 2012)

The works were often put on hold, sometimes due to theft or deterioration of the material, but the subsequent delays in the release of funding were the biggest culprit. The release of funding faced many obstacles to obtain approval from the *Programa de Mutirões Autogeridos* of COHAB (p. 58), considering that mutirão Paulo Freire was the first housing project which was fully designed with a steel structure (Arantes, 2006). The time gained with the use of the prefabricated steel structure was undone by all these delays. All the pauses, resumes and difficulties also damaged the dynamics within the mutirão. Many *mutirantes* didn't understand why the works were delayed or why the government was so unwilling to support a citizens' initiative. Many gave up, some were even excluded because of disrespecting the rules and at the end, there were only 50 families left that were in it from the beginning. (Fieldwork: Das Dores, 2015)



NEGOTIATION + PROJECT
CONSTRUCTION

4 KM





PAULO FREIRE



1998 - 2010



SÃO PAULO, CIDADE TIRADENTES, INÁCIO MONTEIRO



100 FAMILIES



MST LESTE 1



COHAB - MUTIRÃO AUTOGERIDOS



USINA



METALLIC STRUCTURE
CERAMIC BLOCKS



1H40 TO SÃO PAULO CENTRE



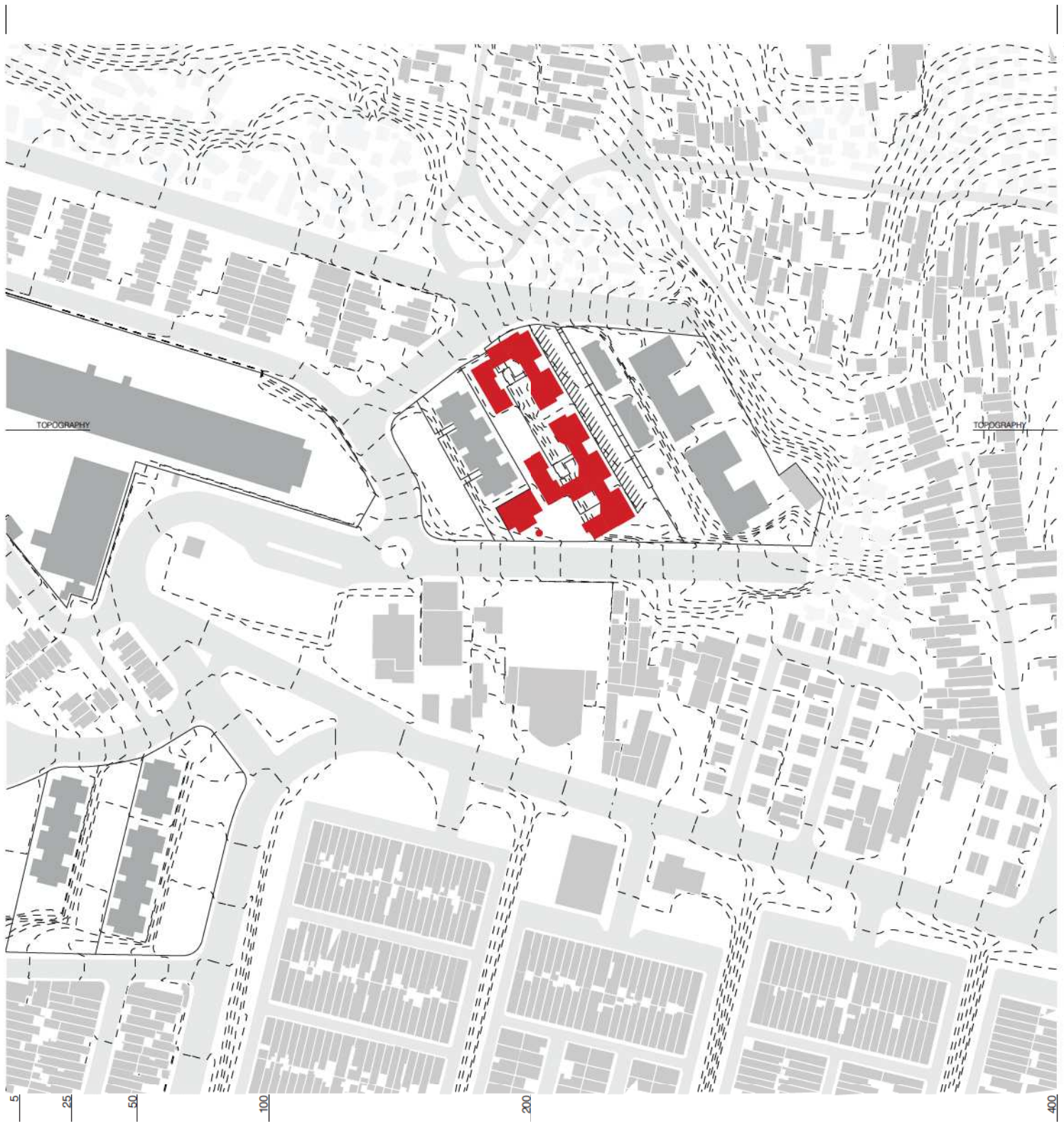
3 007 M²
STEEP TOPOGRAPHY
FLOOR AREA RATIO: 2.16



52 M²
VARYING 5 TO 7 FLOORS
332 UNITS/HA



PARKING COEFFICIENT: 0.34
34 PARKING SPACES



PAULO FREIRE

LOW RISE

HIGH RISE

TOPOGRAPHY



MAP OF PAULO FREIRE, EDITED BY AUTHORS. MAP BASED ON GOOGLE EARTH AND GEOSAMPA. SLOPE BASED ON GEOCONTEXT

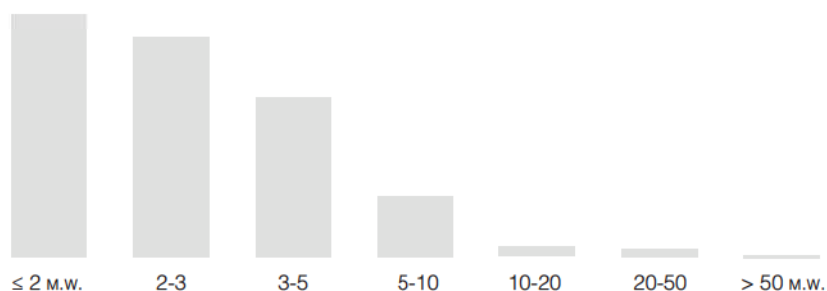
DRAWING ON TOPOGRAPHY | UTILIZANDO A TOPOGRAFIA

CIDADE TIRADENTES - A CITY IN SEARCH FOR CITYNESS

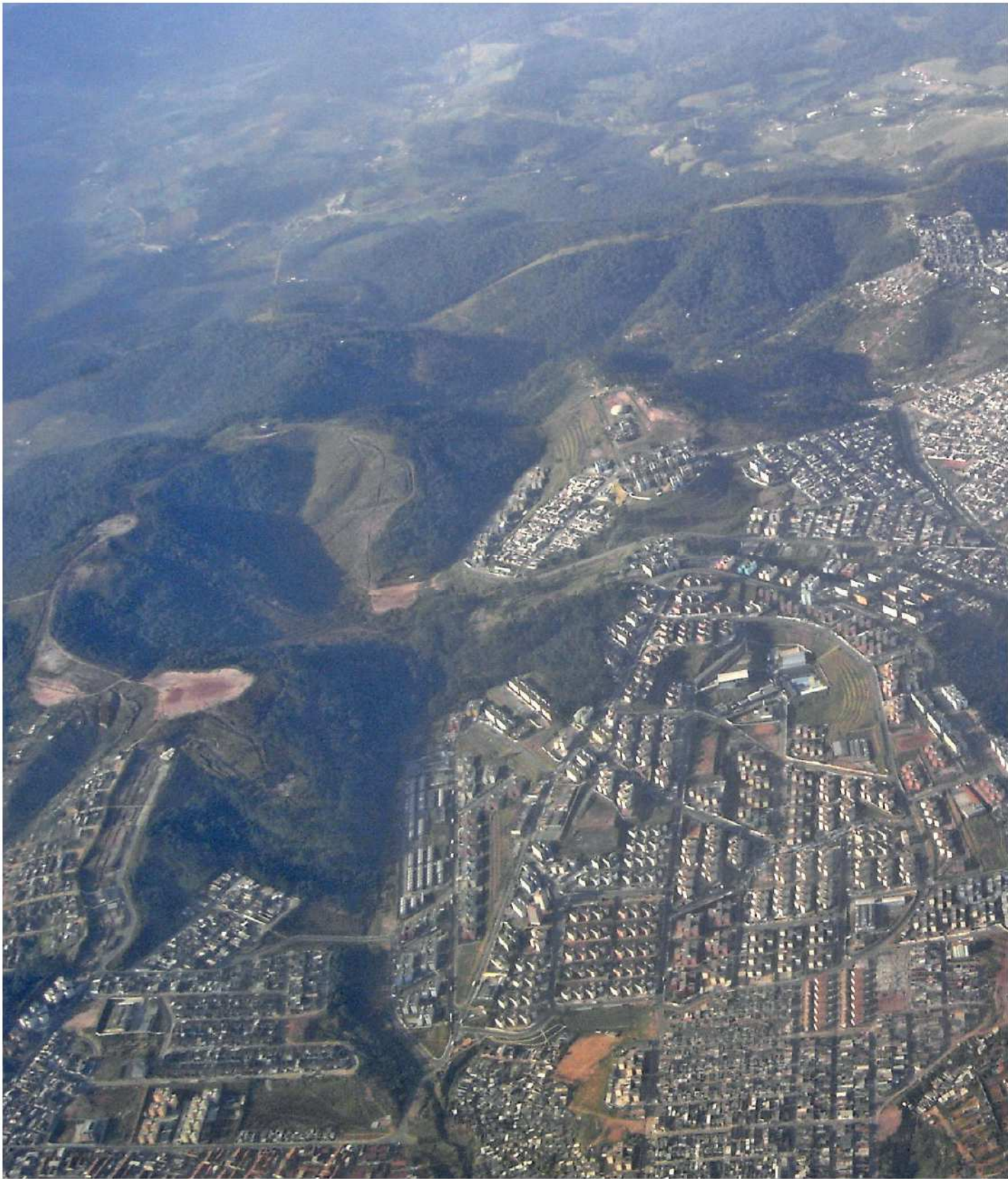
Mutirão Paulo Freire is located in *Conjunto Habitacional Prestes Maia* in Cidade Tiradentes, a district of São Paulo City situated in the very east. At the end of the 1970s, the government and more specifically COHAB (p. 58) and CDHU (p. 58) bought Fazenda Santa Etelvina, better known under the name Cidade Tiradentes, in order to erect social housing on it (Petrella, 2009). It was seen as the solution to respond to the social housing need of the low-income population (Rolnik, 2011). The site Prestes Maia opened in 1975 and was the first of many standardize social housing quarters that would form the landscape of Cidade Tiradentes. In the following decade, over 40,000 social housing units funded by COHAB were built in Cidade Tiradentes (Otero, 2009). Altogether, these units occupy an area of 1,167 hectares. Important to note is that the total area of Cidade Tiradentes amounts only 1,500 hectares (IBGE - website).

Cidade Tiradentes underwent a radical transformation and became the largest social housing complex in Latin America (Arantes, 2006). One of the biggest problems was the composition of social classes, or rather the missing composition. From 1980 to 2000, density rates multiplied by more than twenty, going respectively from 6 persons per hectare to 127 persons per hectare. The latter is almost the double of the average value of São Paulo, varying between 56 to 69 persons per hectare. (IBGE - website)

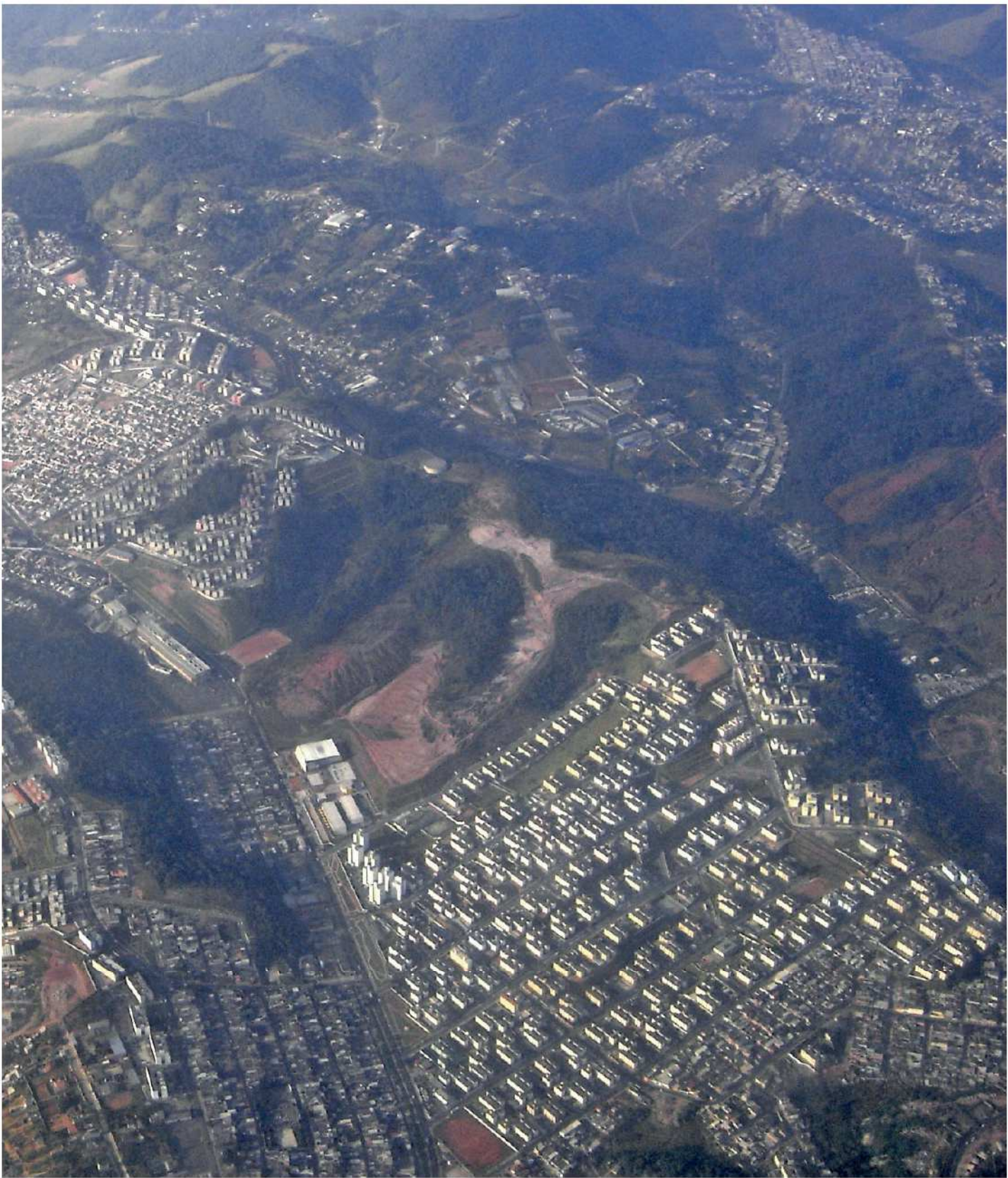
Cidade Tiradentes resulted in a dormitory city, with a lack of commercial spaces, public facilities, and an underdeveloped transportation system. In terms of metropolitan macro-accessibility, residents face problems of long distances and geographic isolation. But also the dynamics in the district internally face similar difficulties. The various complexes are isolated and disconnected from each other, separated by vast emptiness without urbanity. (Otero, 2009)



THE COMPOSITION OF CLASSES IN CIDADE TIRADENTES IN TERMS OF X TIMES THE MINIMUM WAGE (M.W.) - GRAPH BASED ON DATA OF SITE PREFEITURA SÃO PAULO



OVERVIEW OF THE MONOTONE HOUSING COMPLEX THAT CONSTITUTES CIDADE TIRADENTES (SOURCE: ANDRÉ BONACIM)





VIEW OUT OF FENCED MUTIRÃO PAULO FREIRE TOWARDS THE UPCOMING NEW FAVELAS ACROSS THE STREET (2015)





EXPANSION MAP SURROUNDING PAULO FREIRE, INÁCIO MONTEIRO, CIDADE TIRADENTES - BASED ON PETRELLA (2009), GOOGLE EARTH



A VICTORY ON DATE! - GOVERNMENTAL AGENCIES INSTALLING STREET LIGHTS (2015)

TOWARDS IMPROVEMENT

The last few years, there has been a tendency to improve this mono-functionality. Movements started demanding not just the right to land and housing, but also the right to the city. Recent actions of MST Leste 1 resulted in new infrastructure and public facilities, fulfilling the needs of the society. This can be seen in the construction of several schools, hospital, and public squares. For example, the street where mutirão Paulo Freire is located recently acquired illumination (2015/09/26). The euphoria of this victory was unbelievable! The inhabitants could almost not believe that they achieved this by persisting. (Fieldwork, 2015)



PAULO FREIRE: PLAN AND SECTION

4 M

EDITED BY AUTHORS, BASED ON PLANS AND SECTIONS OF USINA





FITNESS EQUIPMENT WITHIN MUTIRÃO PAULO FREIRE, FUNDED BY THE GOVERNMENT, THOUGH USE IS STRICTLY FOR THE INHABITANTS OF MUTIRÃO PAULO FREIRE (2015)



THE INTERNAL CIRCULATION OF MUTIRÃO PAULO FREIRE WITH BRIDGES AND WALKWAYS (2015)

PREFABRICATED STEEL STRUCTURE

The topography of the terrain formed the main challenging for mutirão Paulo Freire. On one of the assemblies, Usina brought a wooden model that caught the attention of the families and provoked large discussions. The *mutirantes* disagreed on the implantations of the building blocks, commenting that there wasn't any space left for a collective leisure area. In order to fit 100 housing units on a steep and actually too small terrain, Usina thus had to come up with a smart design, with high efficiency and allowing this level of density. (Fieldwork: Das Dores; Moreira, 2012)

Usina came up with "*an innovative design, with high architectural quality*" (Usina, 2014, p. 182, translated by author). Usina made smart use of the large height difference of the terrain, letting the building vary from 5 to 7 floors according to the topography. But even more importantly, Usina came up with an unexpected technical solution. Instead of the combination of metal staircases and load bearing masonry, Usina proposed a complete prefabricated steel structure that would allow 'pending' apartments between the blocks. Due to this pending possibility, units could be reorganized into the air and one block could completely be eliminated from the ground. This move created space for a playground, without harming the sizes of the apartments.



PREFABRICATED STEEL STRUCTURE OF MUTIRÃO PAULO FREIRE (2015)

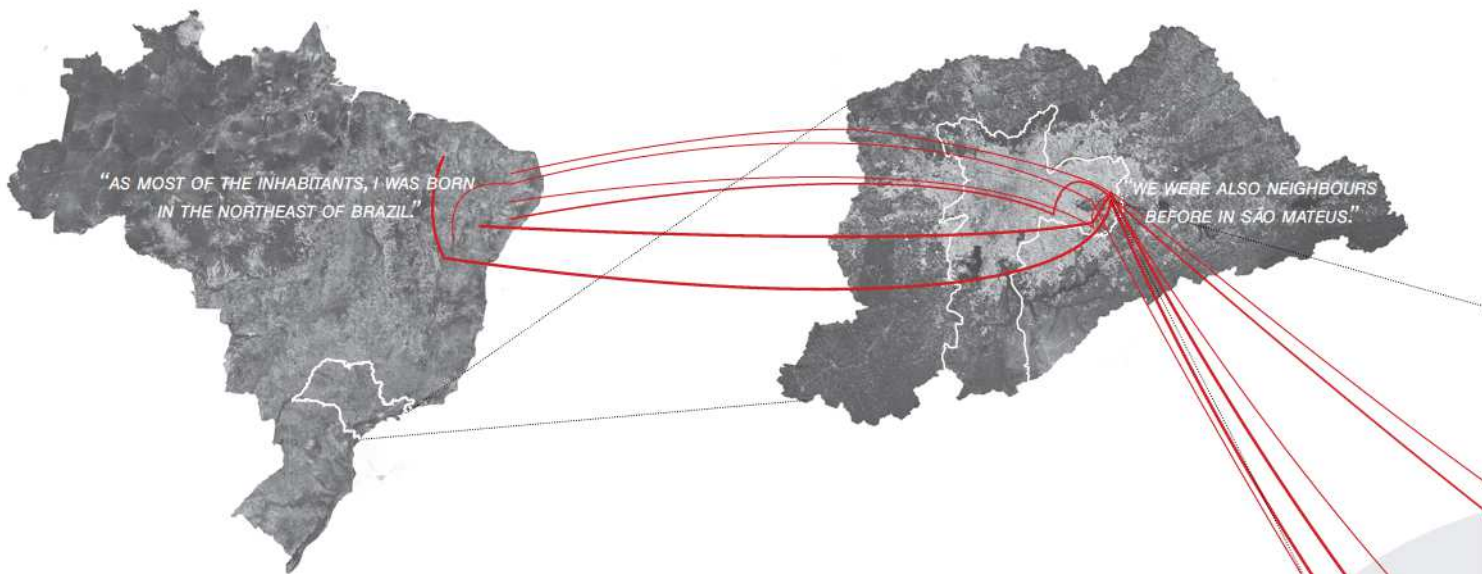


KIDS PLAYING AT ENTRANCE SQUARE OF PAULO FREIRE (2015)

PLAN LIBRE - ADAPT

This prefabricated steel structure also offers the advantage that none of the internal walls are bearing and thus, an open floor plan and a more flexible layout of the housing units are possible, with only the kitchen sink and the bathroom being fixed elements in the design. With this steel structure, Usina attempts to draw outside the lines within the restrictions and rules from CDHU (p. 58) and other authoritative sources. This plan libre enables the families to adapt their apartments according to their needs and the units according to the varying family configurations. In total there were four different typologies made up by Usina, each with a floor area of 52 m². Usina drew for each typology a possible layout, which almost all the residents followed.

Despite the high density, mutirão Paulo Freire has an open and free feeling mostly due to the circulation that is playful yet practical. On ground floor the circulation almost meanders through a sequence of collective spaces and buildings. It's definitely not a project that can be captured in a glance, rather its multi-layered character turns it into a complex design with room for discovery. Besides its recognizable and bright colour, air, light and sight turn mutirão Paulo Freire into a pleasant place for living.

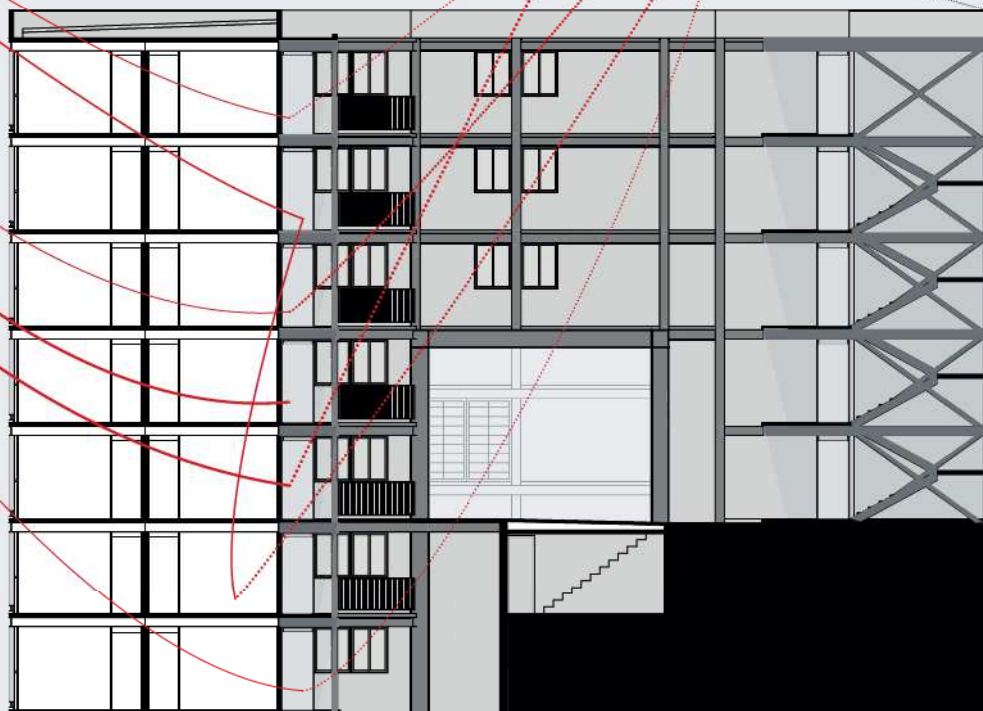


Most *mutirantes* have gone through a severe journey before they could join *mutirão* Paulo Freire. There is no such thing as 'a *mutirante* person', but each person has his own background, own motives and own perspectives for the future, making it impossible to reduce the *mutirante* to a general profile. The only thing that the *mutirantes* have in common is the perseverance of participating, engaging and struggling.

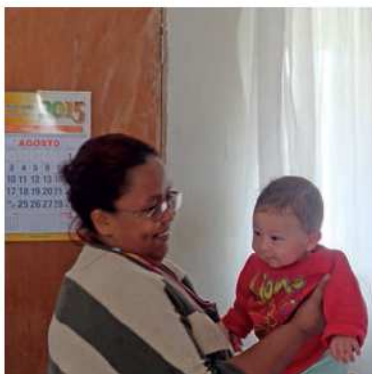
A striking determination is that many *mutirantes* originate from the Northeast of Brazil, the poorest area of the country (IBGE - website). Due to the allurement of work and a better future, São Paulo has been attractive for many *Nordestinos* (p. 61).

Each person tells his own story, contributing to the differences of the person behind the *mutirante*. Since movements, in general, are still considered as a women's world, a lot of women are at work, but all kinds of people engaged in the *mutirão*, going from retired 70-year old couples to single mothers in their 20's. (Fieldwork: *mutirantes* of Paulo Freire, 2015)

BEHIND THE SCENES | *ATRÁS DO CENAS*



FLUXES FROM MUTIRANTES OF PAULO FREIRE, BASED ON FIELDWORK (2015)



DORA - "I was born in Aracaju, in the Northeast of Brazil. I moved to São Paulo, as so many other people, to find a job and found a place to live in São Mateus. I engaged in the movement MST Leste1 and could join the mutirão of Paulo Freire. I have three daughters. The youngest still lives with me together with her two sons, the second got married and moved out a few years ago. My third daughter had the chance to buy an apartment within Paulo Freire. So she only lives a few steps away. She moved out when she got her baby. Mutirão Paulo Freire opened a lot of opportunities for me. I got a job nearby in the library. It's just around the corner. Now, I don't have to go to the centre of São Paulo anymore for my work, it's quite a relief. I am still very engaged in movement MST Leste1, I want to help other people with their mutirão dreams."



AMADA - "I was born in São Paulo, but my parents decided to move back to Bahia in the north of Brazil, where all my family lives. Five years ago, I moved back to São Paulo. I wanted to find a good job and start a family. **I found a job in the centre of São Paulo, I travel 2 hours every day to go there.** I did not engage in the mutirão, but moved here afterwards. Still, a few of the mutirantes became close friends, which I like so much!"



DILMA AND MICHEL - "We live here with our two sons. My wife works in an architecture office in Pinheiros and I work in the centre of São Paulo. I am originally from Ipiranga and my wife was born in Suzano. **Our sons are both studying well. We think it's really important.** Our eldest son hopes to go abroad one day for his studies."

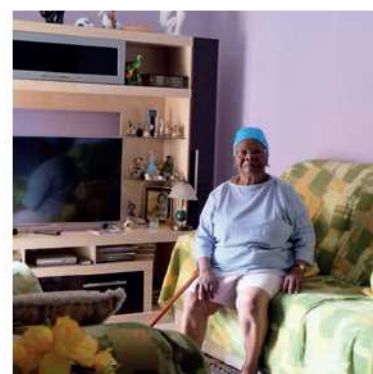


DANI - "I live here with my husband and two sons. My husband and I met in Aracaju where we were both born. We decided to migrate to São Paulo, and eventually found a place to live in São Mateus in rather precarious conditions. Just as Dora, we engaged in the movement of MST Leste 1. We were even in the same base group. At the moment, I as well as my husband are unfortunately both unemployed. I used to work in a shop in São Mateus and last year, I managed to get a job on the World Cup. Unfortunately, that was only temporary."

NAZAREH AND MANOEL - *"We are Dora's neighbours. I was part of the cooking team as my husband engaged in the construction works of the mutirão. We moved here from the centre of São Paulo, but my roots are Spanish. We are already retired, so we don't leave the neighbourhood very often any more."*



HILDA AND IDELZUITE - *"We are two sisters and have been living together all our lives. We really loved working in the mutirão, because it made us feel like one big family. However, it was not easy at all! Each assembly caused many discussions because everybody wanted something else for their new home and the overall struggle was very difficult. At the end, we adore our apartment because it feels so spatial. Since we are both retired, we don't leave the district very often and our family always visits us at home. Before we lived in Santo André, but our origin lies, as applies to most people here, in the north of Brazil."*



NEOMA - *"I live here with my husband and daughter. My daughter studies architecture in São Paulo, I am so proud of her! I actually have three daughters. My two other daughters are already married. They live with their husband and kids in an apartment of Minha Casa Minha Vida. These are really small apartments. It's luckily also in Cidade Tiradentes, so I can often visit them. I work in Santa Maro, so I have to make a 2-hour trip every day there and back."*



DONA MARIA - *"I live here with my dog. Dani and I were neighbours in São Mateus and engaged in the movement MST Leste 1 together. Now we are neighbours again, I love it! I was originally born in the Northeast of São Paulo. My apartment is actually a typology for three bedrooms. I turned two of the bedrooms into one and use it as a storage room now. I really like my apartment, but the neighbourhood is worse because everything is too far away."*





HILDA AND IDELZUITE, TWO SISTERS THAT ENGAGED IN MUTIRÃO PAULO FREIRE, PROUD OF THEIR ACHIEVEMENT (2015)





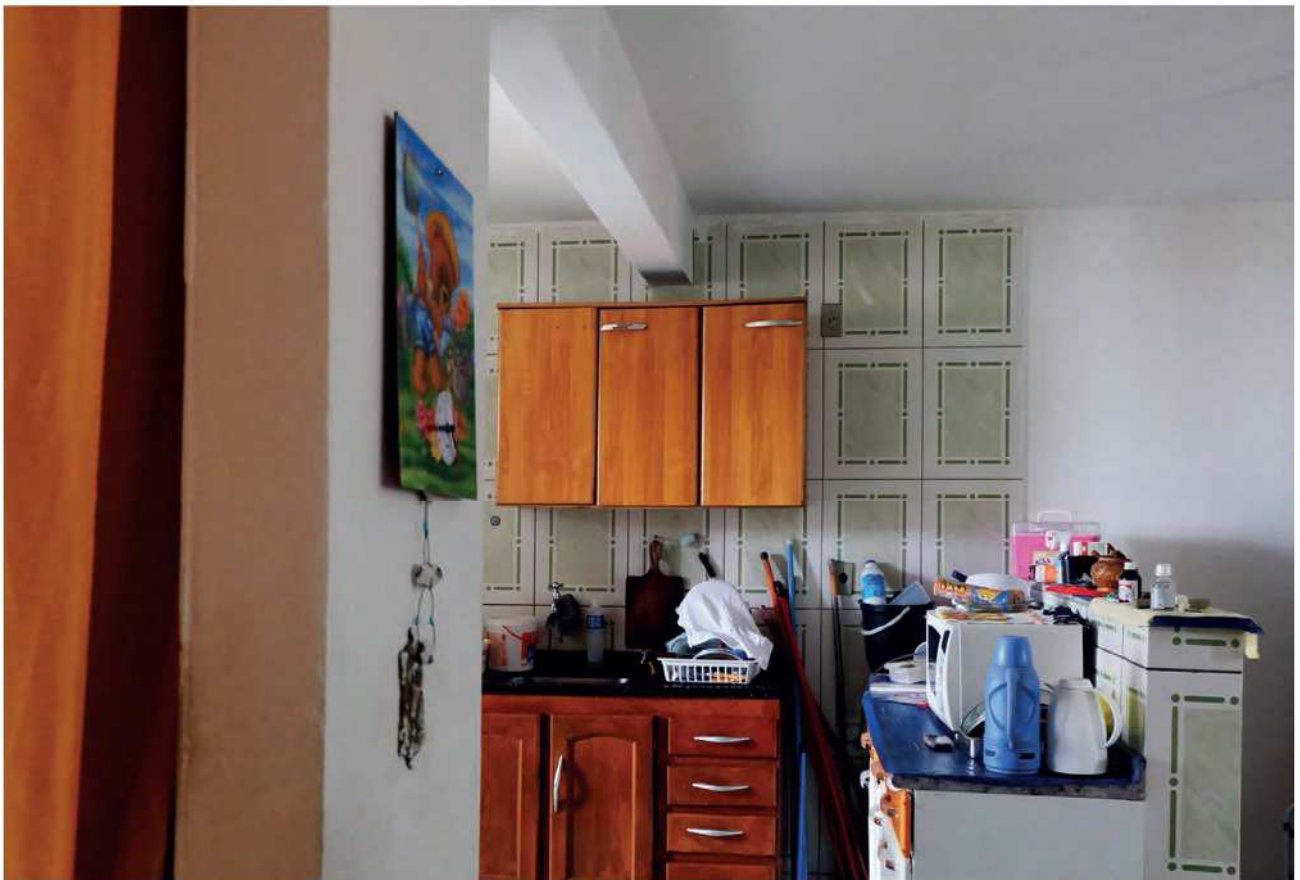
"HERE, EVERYONE IS WELCOME" (NAZAREH, 2015)



NAZAREH AND MANOEL'S LIVING ROOM (2015)



A BEDROOM AND STOREROOM (2015)



NAZAREH AND MANOEL'S KITCHEN (2015)



THE BEDROOM OF NEOMA'S THREE SONS (2015)



NEOMA'S FAMILY AND FRIENDS (2015)



**FLORESTAN FERNANDES AND
JOSÉ MARIA AMAREL [2005]**

MUTIRÃO ON ITS TIPPING POINT | *MUTIRÃO NO SEU PONTO DE INFLEXÃO*





1995

2000

2005

2010

2015



FLORESTAN FERNANDES AND JOSÉ MARIA AMARAL [2005]

MUTIRÃO ON ITS TIPPING POINT
MUTIRÃO NO SEU PONTO DE INFLEXÃO

PLANO DIRETOR

PLANO DIRETOR
REVISED

MUNICIPALITY SÃO PAULO

MINHA CASA MINHA VIDA - ENTIDADES
FUNDO MUNICIPAL DE HABITAÇÃO

CELSO PITTA (PPB)

MARTA SUPLICY (PT)

SERRA
(PSDB)

GILBERTO KASSAB (PSD)

FERNANDO HADDAD (PT)

STATE SÃO PAULO

PROGRAMA DE GESTÃO COMPARTILHADA

PPM - FASE 2

PRÓ-LAR MUTIRÃO ASSOCIATIVO

MINHA CASA MINHA VIDA - ENTIDADES

MÁRIO COVAS (PSDB)

GERALDO ALCKMIN (PSDB)

LEMO
(PFL)

JOSÉ SERRA (PSDB)

GOLDMAN
(PSDB)

GERALDO ALCKMIN (PSDB)

BRAZIL

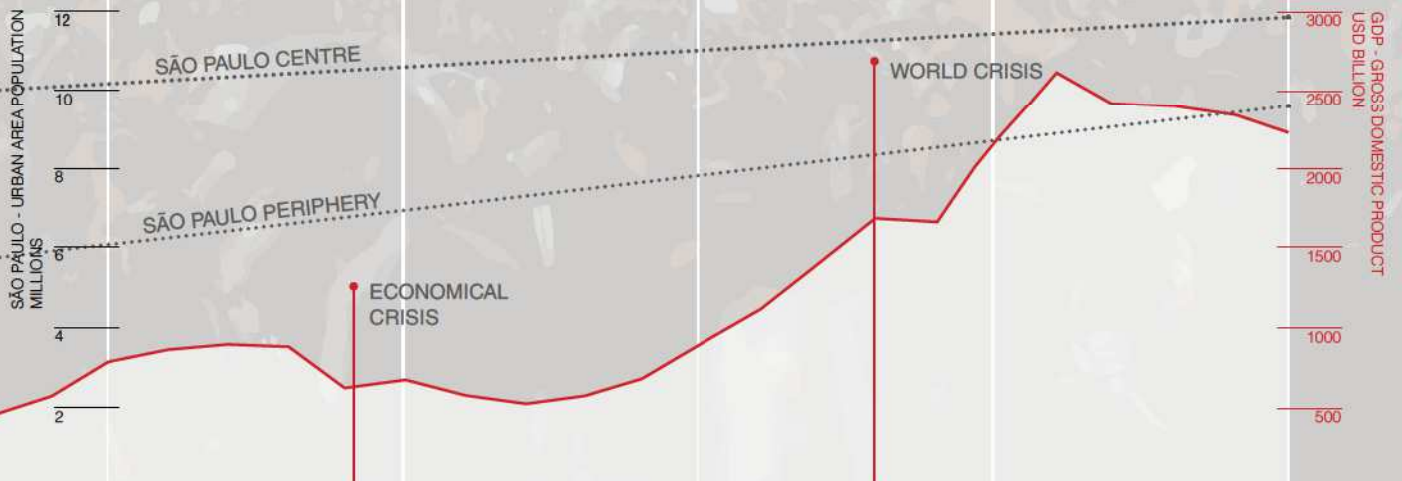
CRÉDITO SOLIDÁRIO

MINHA CASA MINHA VIDA - ENTIDADES

FERNANDO HENRIQUE CARDOSO (PSDB)

LUIS INÁCIO DA SILVA (LULA) (PT)

DILMA ROUSSEFF (PT)



REVIVAL OF MUTIRÃO | REVITALIZAÇÃO DO MUTIRÃO

2002 RED BRAZIL

Following the City Statute's adoption, Luiz Inácio da Silva of PT (p. 58), popularly known as Lula, became president of Brazil in 2002. It was the first time that the Workers' Party PT won the federal elections. Lula, a former analphabetic *favelado* and president of *Sindicato dos Metalúrgicos do ABC* in São Bernardo do Campo, now made it up to the president's seat. Lula becoming president was emblematic for the 'new' political power of social movements and meant the initiation of several social redistribution programmes. In 2003, he created the Ministry of Cities to support the urban planning and the land policy of the municipalities in order to improve housing, sanitation and mobility of the Brazilian population (Ministério das Cidades, 2014 - website; Fieldwork: Barbosa, 2015). Within the Ministry, the National Secretariat for Urban Programmes was charged with supporting the implementation of the City Statute (Friendly, 2013).

2004 CRÉDITO SOLIDÁRIO

In 2004, due to the ongoing political perseverance and struggles of movements to gain funding for mutirão housing programmes, *Ministério das Cidades* founded the *Programa Crédito Solidário* (PCS). Furthermore, new organizations were founded such as *Sistema Nacional de Habitação de Interesse Social* (SNHIS) and a system to select mutirão proposals that would receive funding was elaborated (Moreira, 2009). For the entire country, 684 projects were selected out of 2,759 proposals. However, only 158 mutirão projects were launched for execution. Despite these proposals, not much was realized and high expectations turned once more to a source of frustration. (Rodrigues, 2012)

2004 PLANO DIRETOR

The Federal Constitution of 1988 and the City Statute of 2001 obliged a municipal Master Plan, establishing it as a major urban policy instrument (Rolnik, 2010). Following from this, São Paulo was obligated to develop a master plan, resulting in the *Plano Diretor Estratégico do Município de São Paulo* in 2004. In 2014, ten years later, a revised version was developed and published.

According to the plan's introduction, its main goal is to "humanize" and "rebalance" the city of São Paulo, bringing housing and jobs closer together whilst decreasing socio-territorial inequalities. Several strategies were indeed defined towards achieving these goals. Ambitious strategies were included to fight vacant land in order to fulfil its social function; implement housing policies for

the lowest income groups; incorporate an environmental agenda; improve urban mobility; guiding growth near public transportation; improving urban life in neighbourhoods; promote economic and social development; preserve the heritage and enhance cultural initiatives and strengthen public participation. (Prefeitura da Cidade de São Paulo, 2015)

Related to the above-mentioned goals, diverse urban instruments were established to facilitate access to well-localized areas (Rolnik, 2010) and therefore the *Plano Diretor* defined specific urban zones for social interest, named ZEIS (p. 58). Five different types of ZEIS were distinguished in order to encourage urban recovery, land regularizations and social housing production. By defining these locations, the government hoped to provide more opportunities for social housing in specific areas of the city, seeking to somehow regulate the rather unbridled and unstructured (private) development of the city.

A remarkable advantage of the application of ZEIS is the effective reservation of plots for 'habitation of social interest' (HIS, p. 58). On the other hand, the substitution of the present land use with social housing leaves the owner with a devaluation of his terrain. (Fieldwork: Ungaretti, 2015)

2008 MINHA CASA MINHA VIDA

It is in this context that also a new social housing programme was established, to make smart use of the newly assigned ZEIS zones (Rolnik, 2010). Expectations lowered though and hope faded when in 2008 crisis hit Brazil hard under Lula's administration. Nevertheless, the new federal social housing programme *Minha Casa Minha Vida* - PMCMV (p. 58) was launched according to various critics rather as an economic strategy to get Brazil's economy back on its feet, instead of really aiming to tackle the problematic housing deficit.

Minha Casa Minha Vida is a collection of social housing programmes of the federal government with different funding sources, four of them supporting the lowest-income class until 3 minimum salaries (p. 58). The programme aims to create mechanisms that encourage the production and purchase of new housing units for families with monthly income up to 10 minimum wages, residing in any Brazilian city (Rolnik, 2010). Because of the programme's vast impact on the housing question in São Paulo and Brazil as a whole, resuming the most relevant features and striking facts, is provided on the following pages (p. 196 - 201).



MINHA CASA MINHA VIDA - CONSTRUTORAS (CATCOM, 2015)

MINHA CASA MINHA VIDA - COLLECTION OF SOCIAL HOUSING PROGRAMMES



UP TO 3 TIMES THE MINIMUM WAGE

FUNDO DE ARRENDAMENTO RESIDENCIAL - FAR
UPGRADING OF SLUMS

MINHA CASA MINHA VIDA - ENTIDADES
MUTIRÃO PROJECTS

PROGRAMA NACIONAL DE HABITAÇÃO RURAL - PNHR
NATIONAL PROGRAMME FOR RURAL HABITATION



FROM 3 TO 6 TIMES THE MINIMUM WAGE

PROGRAMA NACIONAL DE HABITAÇÃO URBANO - PNHU
NATIONAL PROGRAMME FOR URBAN HABITATION

PROGRAMA NACIONAL DE HABITAÇÃO RURAL - PNHR
NATIONAL PROGRAMME FOR RURAL HABITATION



FROM 6 TO 10 TIMES THE MINIMUM WAGE

FUNDO DE GARANTIA DE TEMPO SERVIÇO - FGTS
LOAN WITH ADDITIONAL BENEFIT OF REDUCTION
OF INSURANCE COSTS

LEI FEDERAL - PROGRAMA MINHA CASA MINHA VIDA PMCMV

Experiencing the world crisis of 2008, Brazil was in severe need of salvation to get its economy running again. Investment in real estate had overall been proven effective to thrive economies all over the world and convinced also Brazil to take matter into own hands and created Programa Minha Casa Minha Vida under Lula's administration.

After long negotiations with the construction sector, the aim was set on one million homes, planning to provide adequate and "well-located" housing. In order to reach this objective, the active participation of municipalities was (and is) essential. They can mobilize instruments in their master plans that promote the availability of good land for the program, especially for families with incomes of 0 to 6 minimum wages (e.g.: ZEIS) (Rolnik, 2010). PMCMV reached within two years, from the beginning of 2009 until the end of 2010, its goal. Due to this phenomenal success, and the everlasting housing deficit, PMCMV2 was launched in 2011. In total, PMCMV provided in four years almost the same number of housing that BNH¹ took 22 years to realize (HABISP - website). Apart from this success, the programme doesn't act as an urban improver (Rodrigues, 2012). Retaking Turner's stand, "large organizations that want to provide adequate housing have to standardize procedures and products in order to operate economically, but this conflicts with the local and personal variety of housing priorities." (Turner, 1976, p. 97). Likewise, also São Paulo's former director of the Secretary of Housing argued how "it is more than time for the Housing Bureau to understand that the city is an interdisciplinary body. To build affordable housing is not enough. They need to learn how to build cities." (Nabil Bunduki; in Garcia, 2012, p. 1; translated by author)

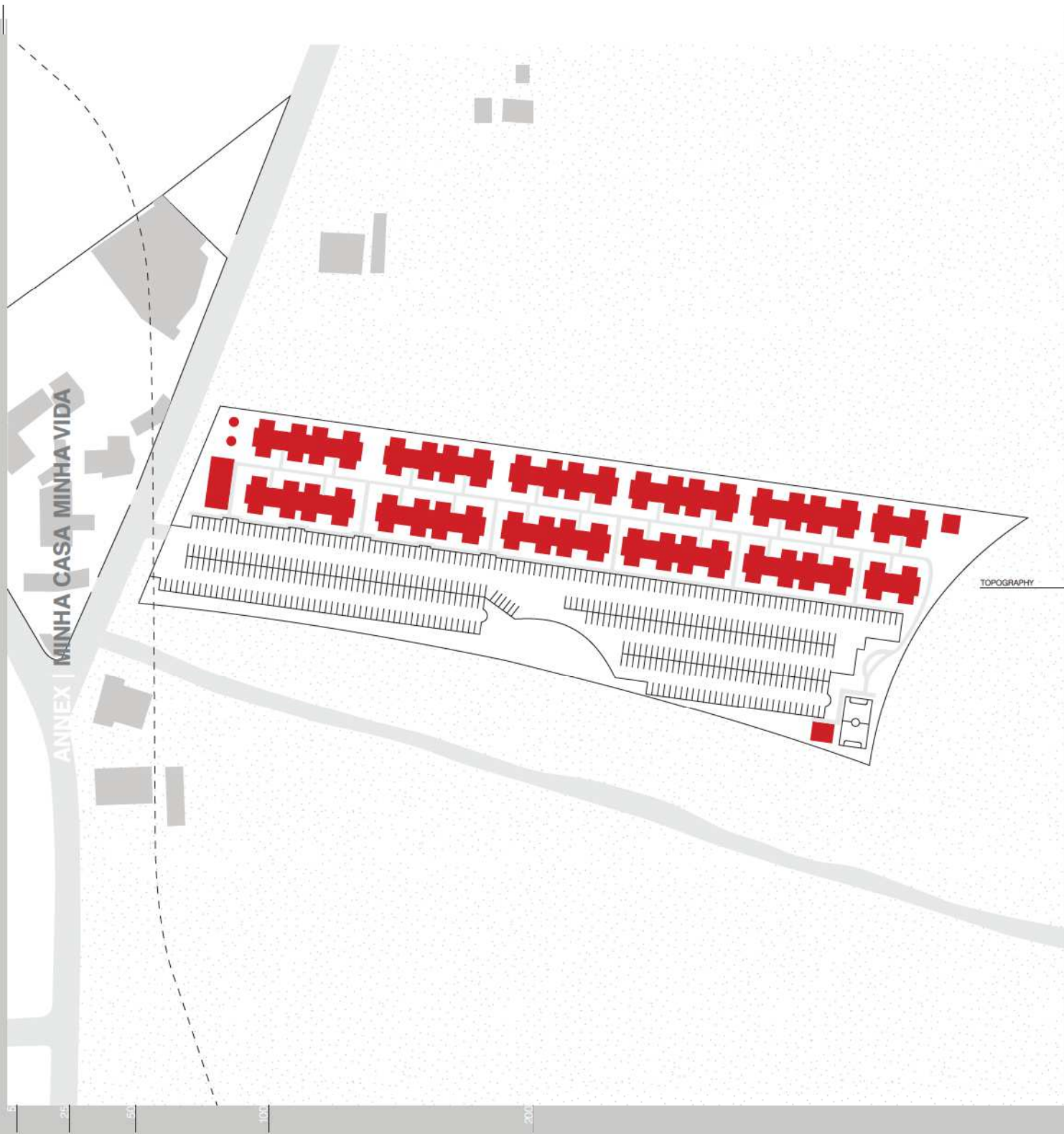
¹ BNH was one of the older programmes to support social housing. The first phase of BNH provided 4,5 million units between 1964 and 1986 (Santos, 1999)

During the release of Minha Casa Minha Vida in 2009, social movements also took initiative by organizing demonstrations and occupations to reopen negotiations, demanding to destine a part of the budget of Minha Casa Minha Vida for mutirão projects. Negotiations persisted and eventually, among the other funding programmes within PMCMV, a distinction was made between PMCMV-Entidades and PMCMV-Construtoras, respectively dealing with mutirão projects and social housing done by private construction companies. PMCMV-Entidades received two percent of the budget of Minha Casa Minha Vida and takes the lowest class of the society into account. Recently, a third phase of MCMV was to be launched in March 2016, but regarding severe political disputes and the pending overthrow of president Dilma Rousseff, all funding is postponed (Fieldwork: Barbosa, 2015; Rodrigues, 2012; Rolnik et al., 2010).

The funds are managed by the federal public bank, Caixa Econômica Federal. This federal bank provides funds for the construction enterprises in case of MCMV-Construtoras or for the social movements in case of MCMV-Entidades.

The lowest income population is divided into three categories. The category on bottom, range 1, includes the families with income from 0 to 3 times the minimum wage. Range 2 includes the families from from 3 to 6 and range 3 from 6 to 10 times the minimum wage (p. 58).

The three ranges are treated differently in terms of funding. Range 1 is subsidised almost completely by the government, using funds from national treasure as grant assistance and exempt of tax as insurance. Ranges 2 and 3, on the other hand, are financed by FGTS - Fundo de Garantia do Tempo de Serviço, meaning that the amount of funding is fewer and the same amount of money has to be returned to the federal bank. (Fieldwork: MRV Engenharia, 2015; Rolnik et al., 2010)



TOPOGRAPHY

MEU LAR

LOW RISE

HIGH RISE

AGRICULTURE

TOPOGRAPHY



MAP OF MEU LAR, EDITED BY AUTHORS. MAP BASED ON GOOGLE EARTH & FIELDWORK. SLOPE BASED ON GEOCONTEXT

MEU LAR



2012 - 2015



MOGI DAS CRUZES, SUZANO



440 FAMILIES



MCMV-CONSTRUTORAS



CURY AND MRV



2H20 TO SÃO PAULO CENTRE



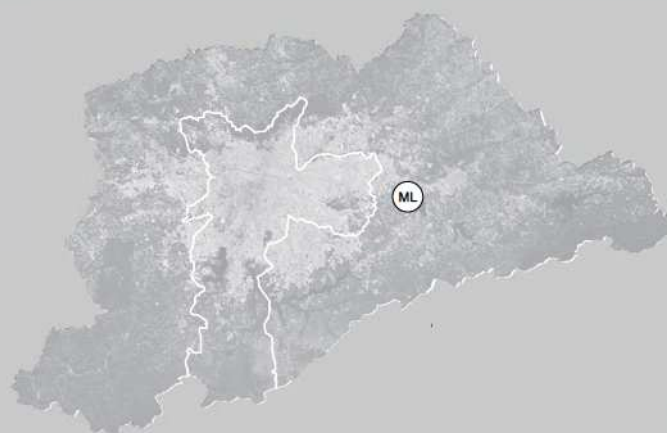
24 200 M²
FLOOR AREA RATIO: 0.87



44 M²
5 FLOORS
181 UNITS/HA



PARKING COEFFICIENT: 1
440 PARKING SPACES



IN THE MIDST OF AGRICULTURE

In Suzano, an adjacent municipality of São Paulo that lies in terms of distance 40 kilometres or in terms of public transport more than an hour and a half away from São Paulo centre, one of the numerous Minha Casa Minha Vida projects, the project Meu Lar (literally: 'my own home') is located. Meu Lar is a result of PMCMV-Construtoras, which represents 98 percent of the total budget of Minha Casa Minha Vida, and is destined for the income-class 3-6 times the minimum wage. The company Cury was the contractor and the company MRV Engenharia functions as real estate agency and intermediary between Caixa Econômica Federal, the contractor and the buyer. (Fieldwork: MRV Engenharia, 2015)

The plot of Meu Lar is located in a prevaillingly agricultural area, rather isolated from the city by a landscape of agriculture fields. Only in the south a few houses can be seen, although, many plans are made for other social housing projects that would gradually transform the neighbourhood into another social housing complex. A rural road to the North forms the connection to central Suzano. (Fieldwork, 2015)



MEU LAR - MONOTONE, FUNCTIONAL HOUSING COMPLEX BY MINHA CASA MINHA VIDA - CONSTRUTORAS (2015)



MEU LAR - PARKING AREA (2015)

A RATIONAL DESIGN WITHIN FOUR WALLS

The project itself provides housing for 440 families, organized in 22 towers rising up in two parallel rows. Every tower consists of five floors and each floor contains four apartments. The spacing between these two rows is rather small and only a footpath and a green area separates the two rows, resulting in rather desolated monotone, functional architecture. All the apartments are identical, 44 m² each, the absolute minimum according to the standards imposed by PMCMV (p. 58) (Fieldwork, 2015).

Although, the project did integrate a few community facilities for the inhabitants of Meu Lar. A playground, a common barbecue area and a 'party' room are provided within the walls of Meu Lar, restricting the access for solely the inhabitants. Besides housing and a few common facilities, parking is remarkably present in the project. Nearly half of the plot serves as parking, providing every apartment with a personal parking spot. Each parking spot is marked by a number, emphasizing individual ownership. Apart from a few parked cars, the extensive grey plain is underused and desolated. (Fieldwork, 2015)



PROPAGANDA POSTERS 'MINHA CASA MINHA VIDA'

A WORD ON MCMV-CONSTRUTORAS

The search for private ownership was strongly emphasized under Lula's administration and a massive propaganda machinery largely convinced the lower income class that a 'casa própria' is the one and only decent solution for any housing question. Consequently, even though these places were often located in the periphery with a lack of infrastructure, many people were and still are attracted by the programme's promises of a true 'casa própria': one's own privately owned house, as the model of success. (Corrêa de Lago, 2012). As will be seen later, curiously enough, also social housing movements largely took over this emphasis and radical belief of "the private house" - wherever locate, whatever design - as the one and only ultimate goal and decent solution for the wide variety of housing issues and housing aspirations. Consequently, also assessorias técnicas as Usina had to adhere these new set 'standards'.

Compared to MCMV-Entidades, social housing apartments from MCMV-Construtoras are averagely 20% smaller and people are allocated according to the waiting list, wherever the project is located. After queuing and waiting, they can be sent out over the whole area of São Paulo, far from their jobs, family.... People are allowed to refuse this spot, but then they end up again at the bottom of the list and the waiting starts all over. (Fieldwork: Germano, 2015)

With the launch of Minha Casa Minha Vida, private construction enterprises suddenly received a lot of project commissions and due to the programme, thousands of homes in urban borders and beyond were build. 120 MCMV-apartments are sold each day, meaning 5 per hour or one apartment each 12 minutes, affirming the ongoing housing necessity and the success of PMCMV (Fieldwork: MRV Engenharia, 2015). However, the construction enterprises overall miss urban consideration and produce an enormous amount of social housing units without considering urban consequences whatsoever. The socio-territorial effect of the Minha Casa Minha Vida boom in Brazil is the same as in the previous decades of the past: 'closure' of peripheral urban areas for low-income population and residents in hazardous areas and production of precarious housing in the urban borders without the minimum infrastructure required by the Caixa itself, however with the support of the municipalities. The urban peripheries diversify themselves economically and socially from housing areas that are well located in terms of public facilities and services. (Corrêa do Lago, 2011)

Housing production, after all these years, still follows the same pattern from the peripheral standard in history. In the sixties and seventies, it was the government, through COHAB, that promoted this peripheralization. Nowadays, through Minha Casa Minha Vida, this phenomenon is as well directly promoted by the government and even strengthened by the private constructors, who define not only the location and the percentages of the target audience within the rules, but also the typologies and the quality of the buildings are with their say. The power - and duty - of São Paulo municipality to control the location and the quality of the new projects is not being exercised, nor well used. The provision of ZEIS zones can be seen as a good attempt, but the application of this territorial tool doesn't seem to be the priority of municipalities.

Also during the *Minha Casa Minha Vida* programme mutirão projects continued to be carried out, yet mostly under a different form as in the previous decades. In 2004, in the light of the foundation of *Crédito Solidário*, MST Leste 1 started to search for a terrain to start a novel mutirão project. This quest was the beginning of the story of mutirões Florestan Fernandes and José Maria Amaral (Fieldwork: Ambiente, 2015).

It was one year later, in 2005, that MST Leste 1 achieved a purchase option of a terrain located in Cidade Tiradentes. Unfortunately, when the design and the documents were ready and delivered to *Caixa Econômica Federal* for approval and admission for funding, the movement discovered that the terrain, which was worth a million *reais*, had a million and a half *reais* debt with São Paulo municipality. Furthermore, additional costs, going from property taxes to sanitation costs, made it impossible for MST Leste 1 to purchase the terrain. Shortly afterwards, a second terrain, as well in Cidade Tiradentes, was found but the land had a lot of heirs, a problem inventory and a lawsuit that was not moving well. All of this brought the movement and the association back to square one (Aquino, 2015).

MST Leste 1 continued its quest for terrain, but was at the same time inspired by a financing strategy applied by the movement of Zona Oeste (West Zone) of São Paulo. This strategy involved that families that would participate in the upcoming mutirão project were obligated to pay a fixed amount of money every month. This way, in anticipation of the approval of funding, MST Leste 1 would be able to purchase a terrain themselves (Aquino, 2015). The main issue with *Crédito Solidário* namely was that a terrain only could be bought when the project was approved and funding thus was acquired (Moreira, 2009). As such, during the wait for approval, movements continuously lived in risk to lose 'their' terrain and as such also the intended project.

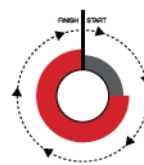
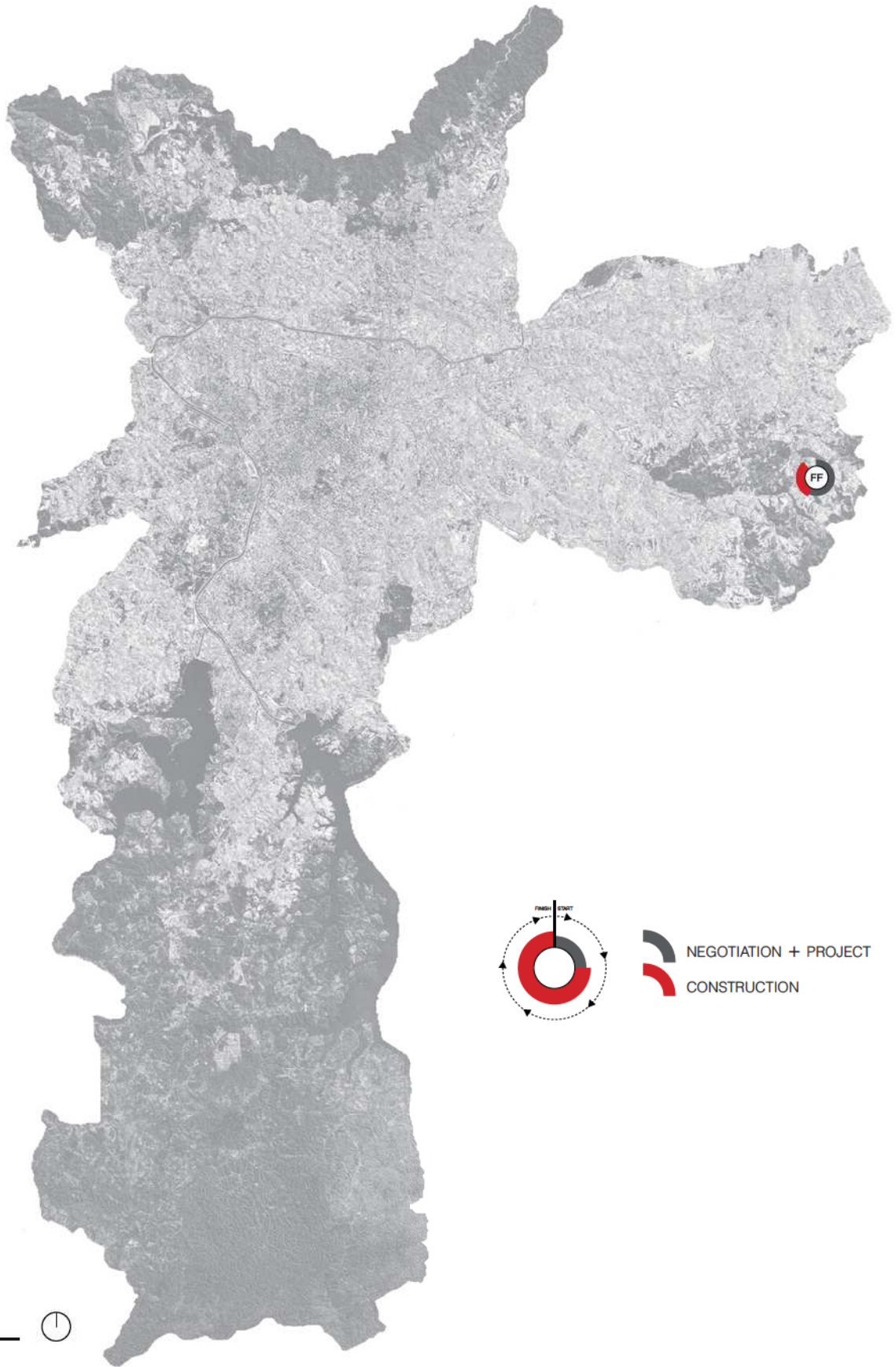
It was due to this tactic that MST Leste would acquire its novel terrain, as well located in Cidade Tiradentes. The movement namely negotiated themselves with the owner

of the terrain and agreed that 10% of the total price of the terrain would be paid within two months and the remaining part would be paid within the year. Gathering the money caused internal troubles, but luckily they received external help from the Catholic Church and Habitat para a Humanidade, an NGO for housing production. The terrain was officially bought in April 2010. (Aquino, 2015)

Meanwhile, MST Leste 1 contacted assessoria técnica Ambiente in order to elaborate a design. The money that was collected monthly by the families was partially spent to purchase the terrain but also to pay the assessoria técnica and to build a minimal structure on the terrain. The latter consisted of two wooden houses containing a bathroom and a kitchen, in which two families lived in order to prevent occupations and material theft. (Aquino, 2015)

About three years after the purchase of the terrain, the project was approved, the funding was released and the works on the construction site finally could be initiated (Aquino, 2015). By that time, *Crédito Solidário* was no longer valid and *Minha Casa Minha Vida* had already entered from 2009 onwards into force. The association Florestan Fernandes and José Maria Amaral could make application to the two percentage of the *Minha Casa Minha Vida* programme, represented by PMCMV-Entidades (Fieldwork: Ambiente, 2015)

Due to the many delays and problems, the spirit during the works on the construction site within both associations Florestan Fernandes and José Maria Amaral was far gone. Many families had given up and new families had joined along the way. But the fact that the latter weren't in it 'from the beginning' caused frustrations. It was necessary to carry out a 'rescue' and remember the collective idea behind mutirão. With the metaphor, "one match can be broken, but it's impossible to break a bunch of matches when bond together", the social workers, hired by MST Leste 1, wanted to show that many problems only can be solved by the collective and that someone alone impossibly can achieve the same result, emphasizing the importance of working together. (Aquino, 2015)



NEGOTIATION + PROJECT
CONSTRUCTION

4 KM





FLORESTAN FERNANDES AND JOSÉ MARIA AMAREL



2005 - ...



SÃO PAULO, CIDADE TIRADENTES



396 FAMILIES



MST LESTE 1



MCMV-ENTIDADES



AMBIENTE



CONCRETE



1H50 TO SÃO PAULO CENTRE



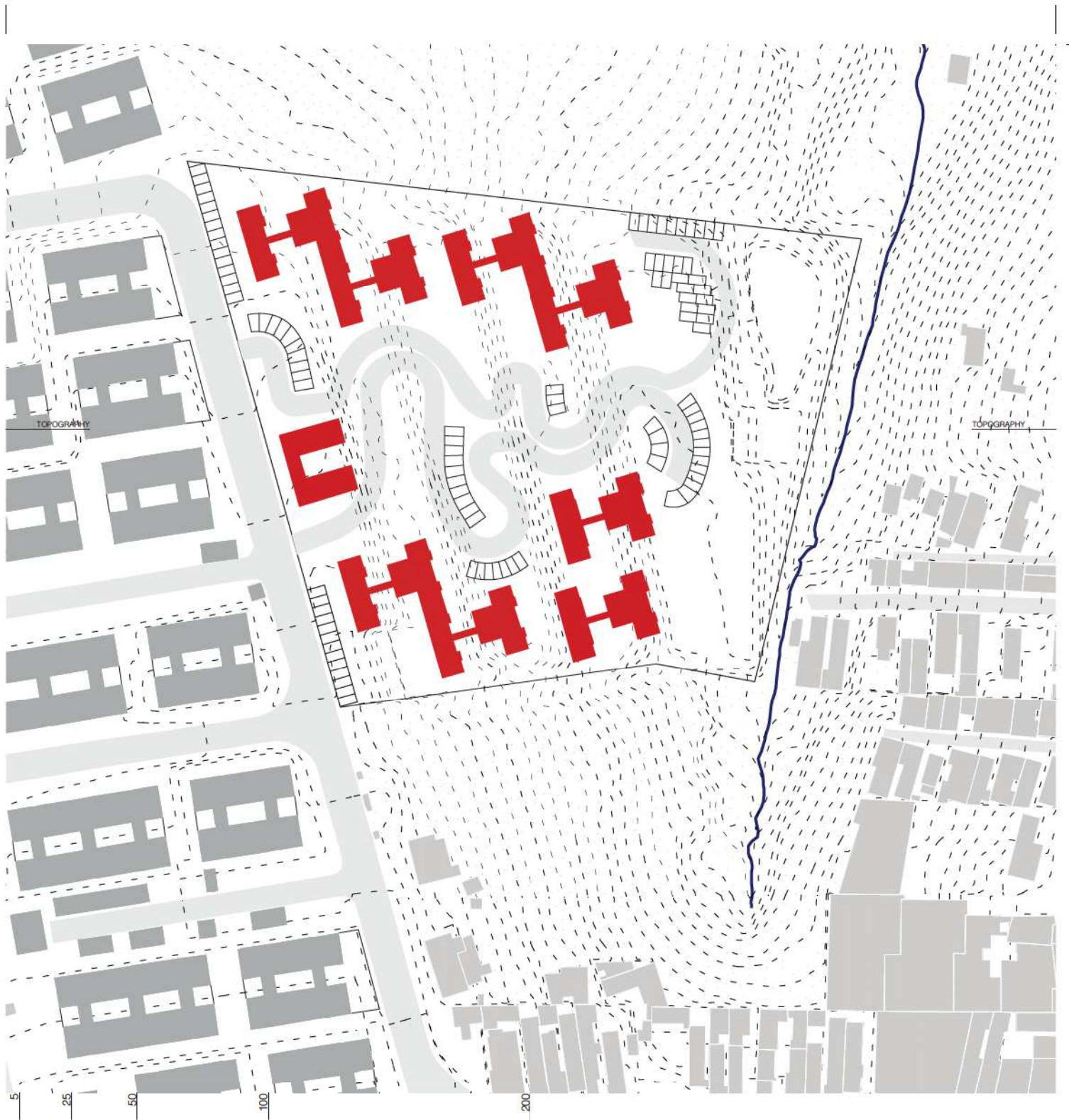
18 000 M²
STEEP TOPOGRAPHY
FLOOR AREA RATIO: 1,43



58 M²
VARYING 11 TO 14 FLOORS
220 UNITS/HA

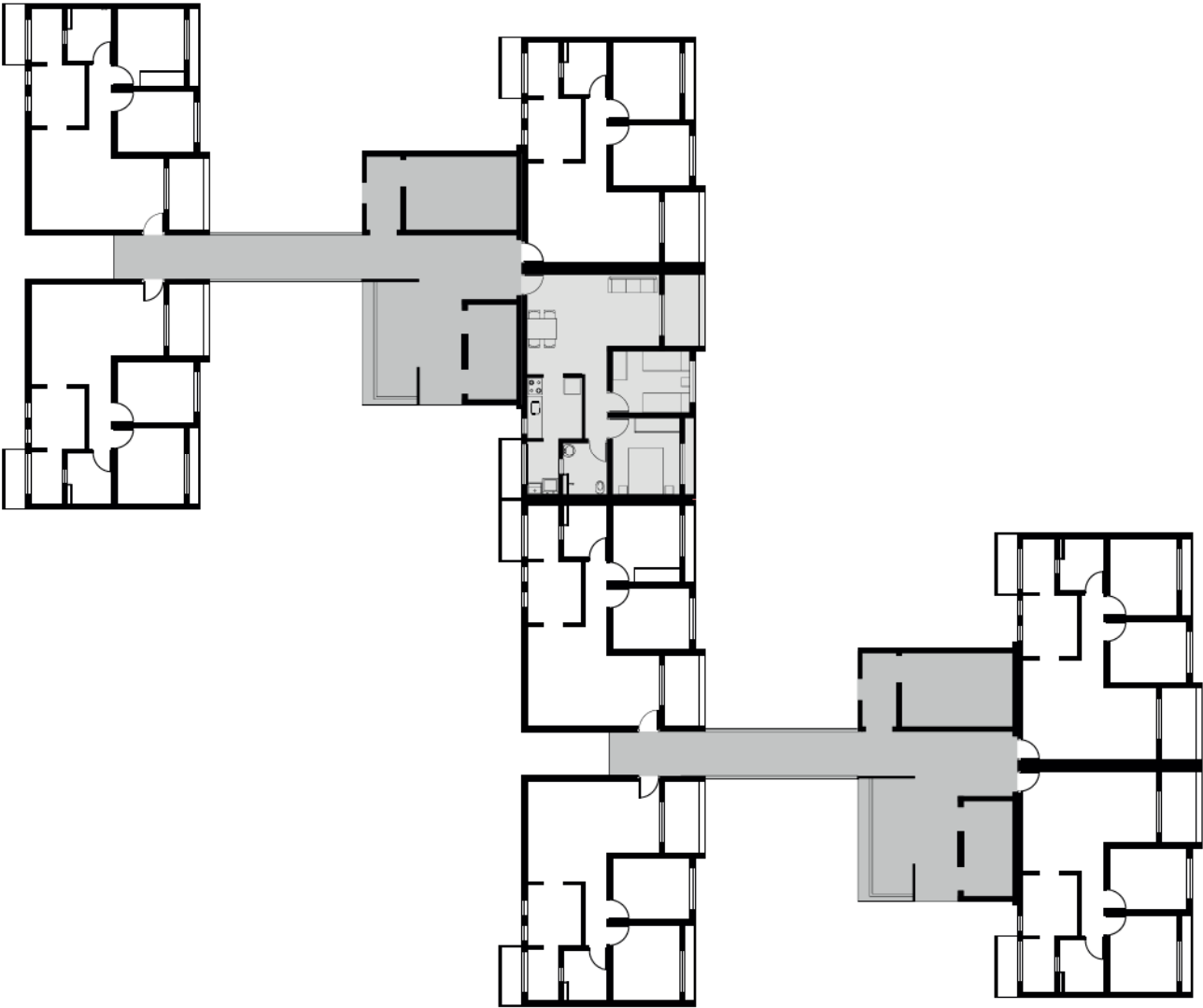


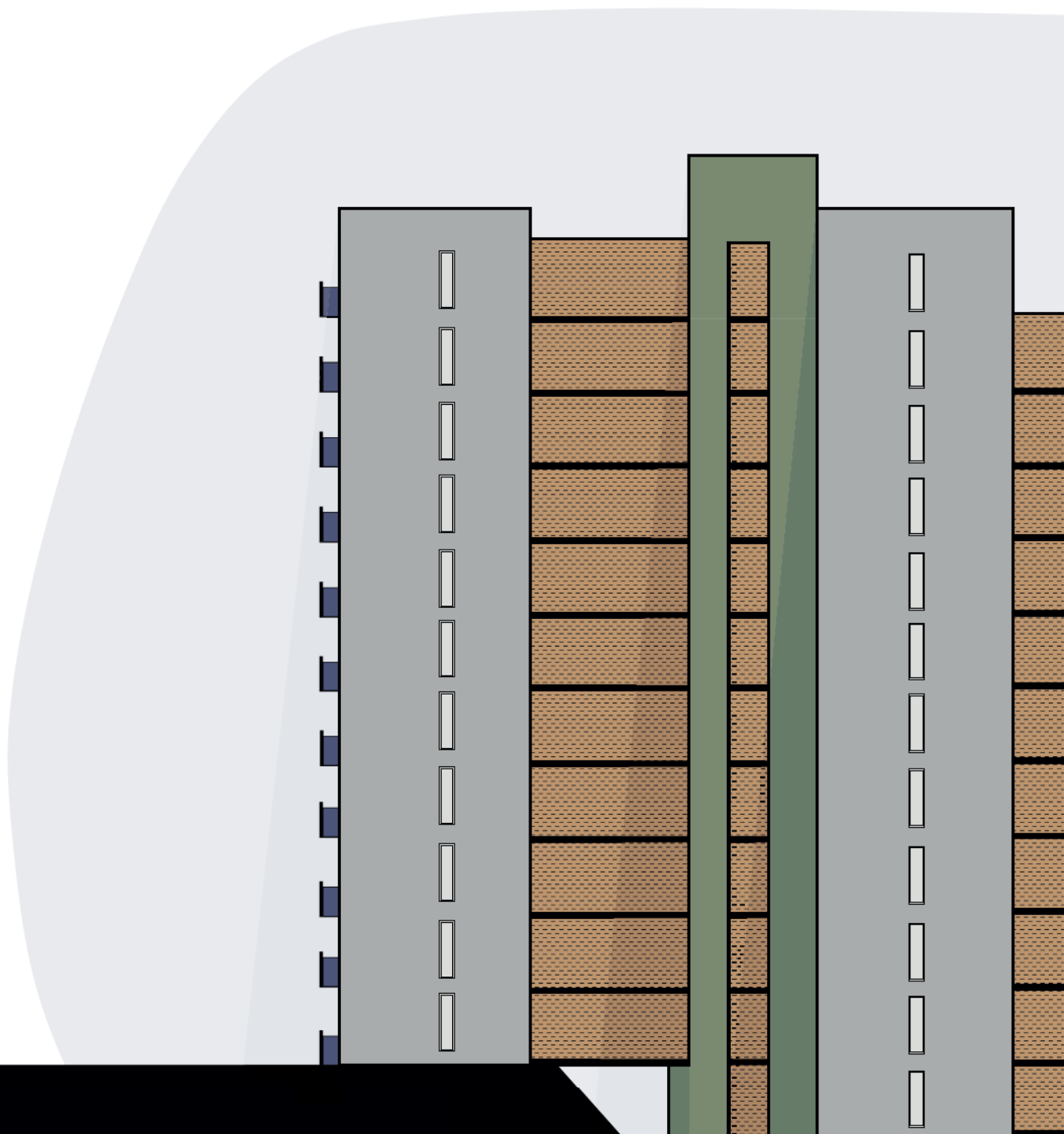
PARKING COEFFICIENT: 0.27
106 PARKING SPACES



FLORESTAN FERNANDES & JOSÉ AMARAL MARIA
 LOW RISE
 HIGH RISE
 RIVER
 UNCULTIVATED LAND
 TOPOGRAPHY

MAP OF FLORESTAN FERNANDES AND JOSÉ MARIA AMARAL, EDITED BY AUTHORS. MAP BASED ON GOOGLE EARTH, GEOSAMPA AND MST LESTE 1 (2011) P. 19. SLOPE BASED ON GEOCONTEXT

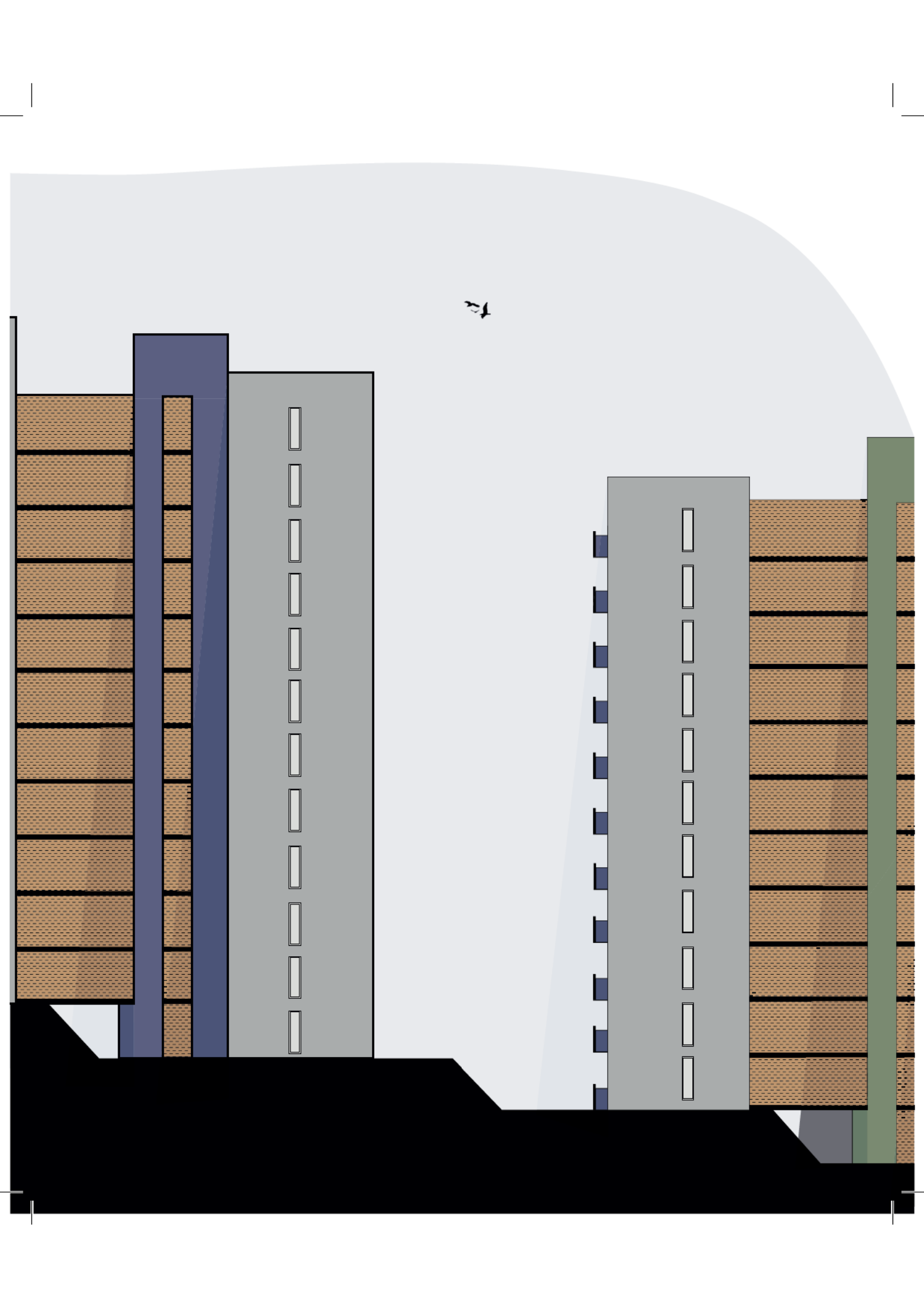




FLORESTAN FERNADES: PLANS AND SECTION

4 M

EDITED BY AUTHORS, BASED ON PLANS AND SECTIONS OF AMBIENTE AND MST LESTE 1 (2011) P. 29





'DECORATED' CONCRETE OF FLORESTAN FERNANDES DURING THE INAUGURATION FESTIVITY (2015)

A CONCRETE IDEA

The project is not completely finished yet, but the inauguration of the building shell took place in September 2015. Mutirões Florestan Fernandes and José Maria Amaral provide housing for 396 families. The project lies in Guaianazes in Cidade Tiradentes, in a predominantly residential area. In the south of the terrain are typical monotone social housing blocks located, that characterize Cidade Tiradentes. In the north, on the other side of the river, small-scale houses, reaching up to three floors maximum from the boundary. (Fieldwork, 2015)

The price of land, even in Cidade Tiradentes, has forcedly increased over the years and this translated itself into the amount of levels a mutirão project 'has' to reach in order to cope with the price of the terrain. For the first time ever in Brazil and beyond, a mutirão project reached this kind of high-rise architecture (Fieldwork: Kocura, 2015). Considering the altitude of the project, Ambiente had to explore a building technology that had never before been used in mutirão projects. A skeletal structure out of concrete was erected by a professional contractor, filled with self-bearing masonry. Since working on the highest floors would not be safe for the inexperienced *mutirantes*, they mainly assisted in the arranging and allocating of the building materials. (Fieldwork: Ambiente, 2015)



PASSERELLES OF FLORESTAN FERNANDES IN PROGRESS (2015)

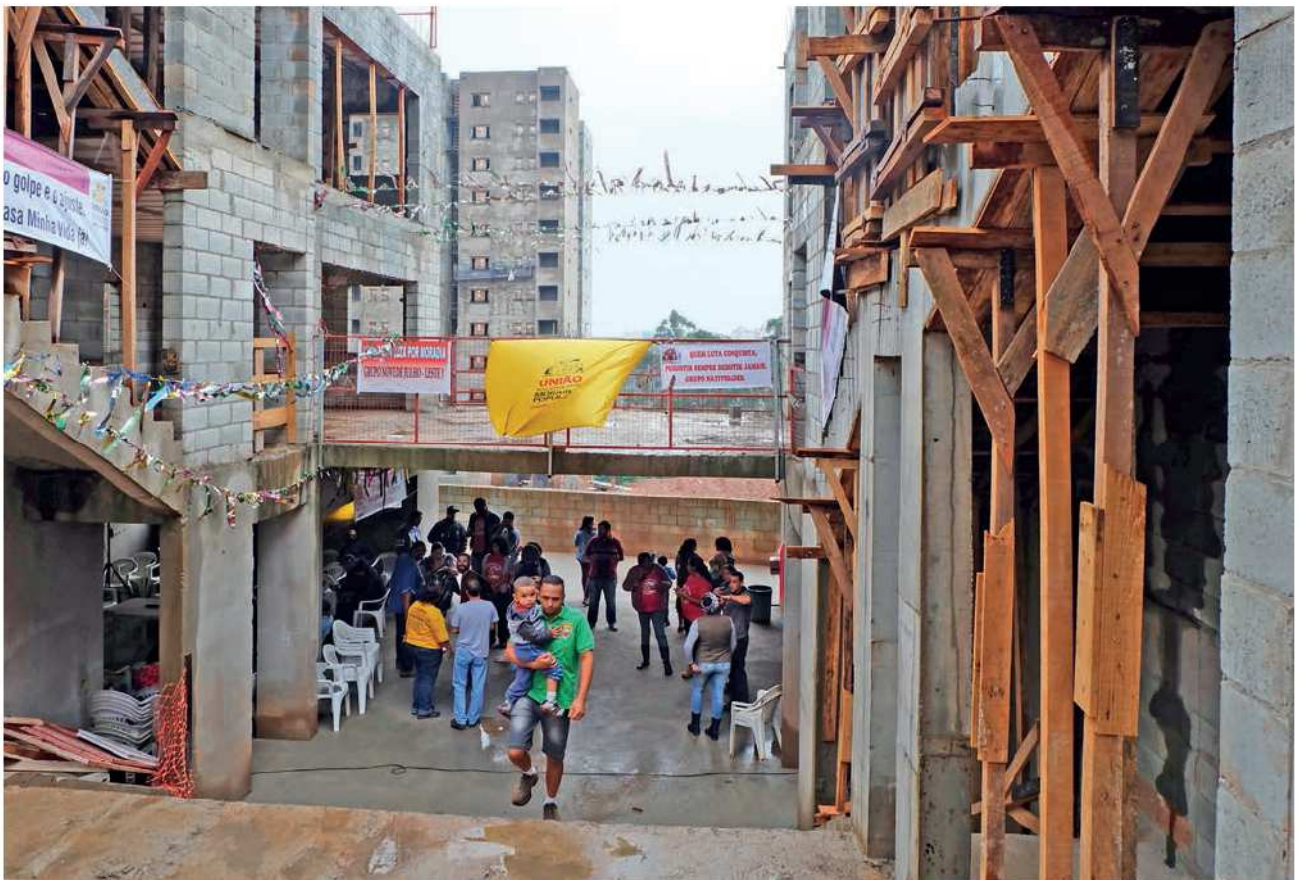
BETWEEN PRIVATE AND PUBLIC

The project itself is divided into two parts that are more or less each other's mirror image. The design consists of eight blocks, or rather towers, that vary from 11 to 13 floors according to the topography of the terrain. The project counts 4 circulation blocks, providing each time access to two towers by footbridges that are described as 'streets in the air'. In contrast with other *mutirão* projects, each circulation block is equipped with an elevator which significantly influenced the price of the project. (Fieldwork, 2015)

Besides the design, the same entrance and a *portaria*, the two projects have little in communal. Two roads meander through the projects, almost parallel to each other, yet not crossing neither touching. The asphalt road provides access to each tower and collects the necessary amount of parking spots on his sides. (Fieldwork, 2015)

Each apartment consists of 58m² and has the same layout. In addition, each dwelling, which is quite unique in social housing through Brazil, has its own private terrace. The terraces are all facing the same side in order to ensure more privacy for each apartment. (Fieldwork, 2015)

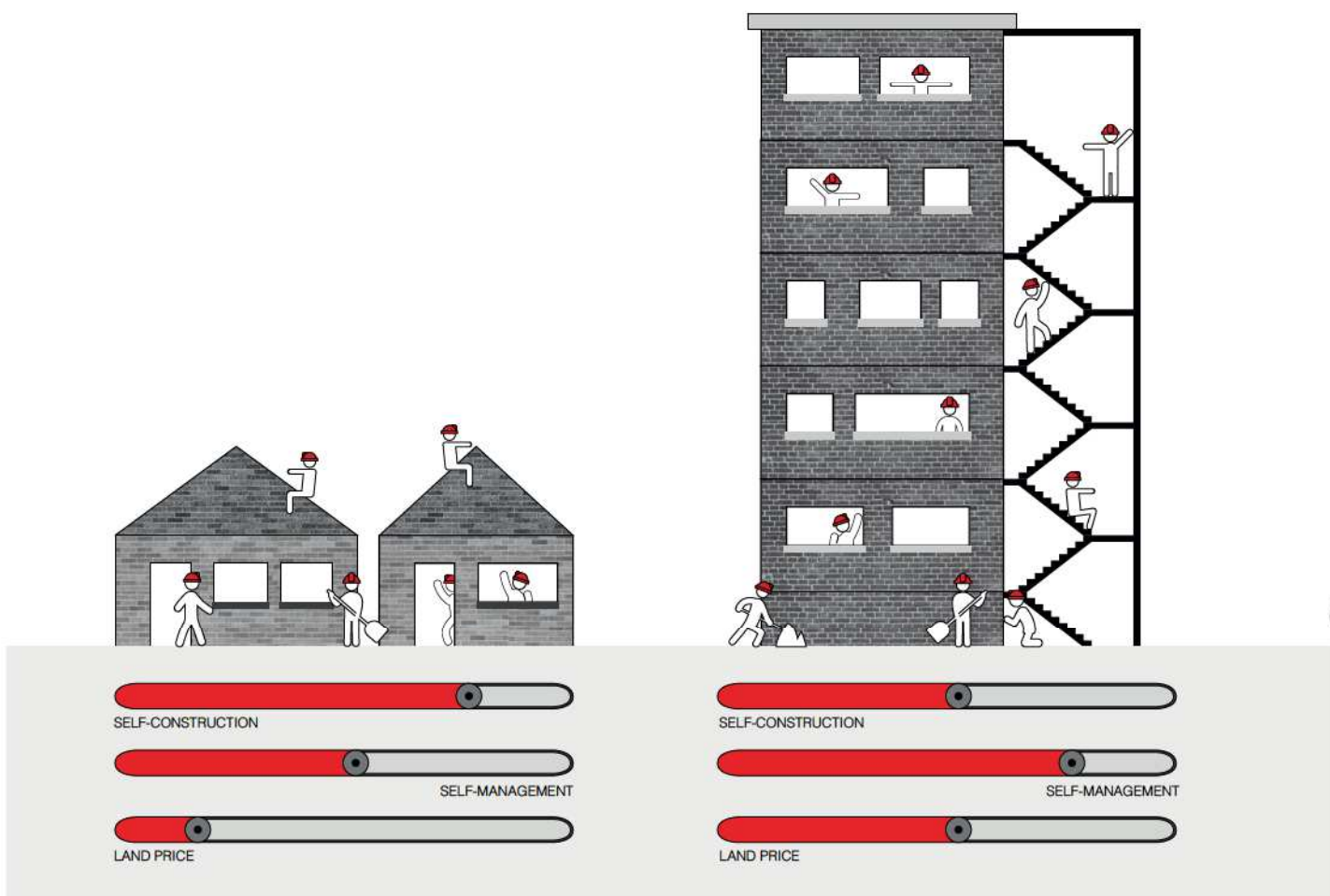
Furthermore, *mutirão* Florestan Fernandes and José Maria Amaral incorporated a day care centre in the design. The day care is meant for the whole region and opens up to the neighbourhood. Nevertheless, the gates that form the entrance to Florestan Fernandes and José Maria Amaral are immediately privatising the towers and the dwellings. The fences can be seen as the spatial translation of the importance that is designated, even by social movement members, to security infrastructure and aesthetics, underpinning the private character of the residential enclave. (Fieldwork, 2015)



THE INAUGURATION FESTIVITY OF FLORESTAN FERNANDES (2015)



CHILD WAVING THE FLAG OF MST LESTE 1 ON THE INAUGURATION FESTIVITY (2015)



VARIATION BETWEEN THE PERCENTAGE OF SELF-MANAGEMENT AND SELF-CONSTRUCTION, FOLLOWING FROM AUGMENTING LAND PRICES AND MORE COMPLEX CONSTRUCTIONS. SCHEMES BASED ON FIELDWORK (2015)

MUTIRÃO, A CONTESTED NOTION | *MUTIRÃO, UMA NOÇÃO CONTESTADA*

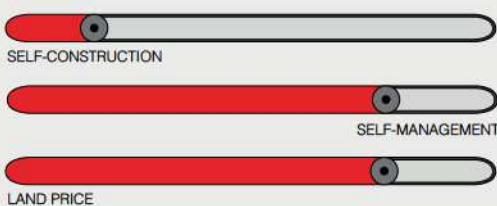
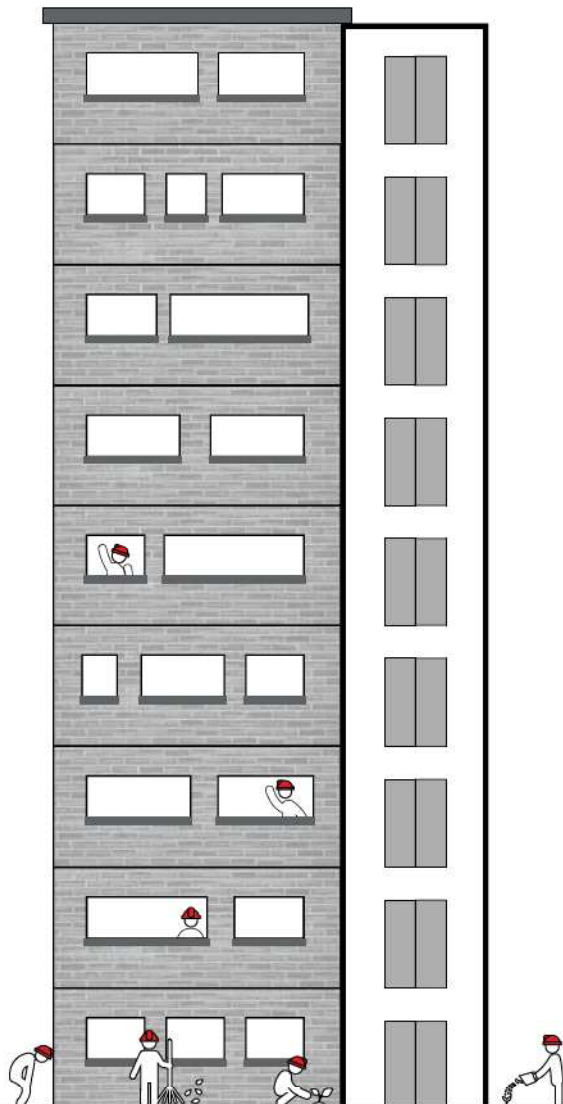
VICISSITUDES OF SELF-CONSTRUCTION AND SELF-MANAGEMENT

Considering cooperative self-construction, works on the construction site nowadays are only for a small part done by the *mutirantes* themselves, while a reasonable part is executed by a contractor, hired by the movement. It can be questioned if the notion of *mutirão* even still stands when only less than 5% of the works is executed by the *mutirantes*, using it more as a social 'team-building' event than as a veritable form of self-construction. In many recent experiments, self-construction is largely replaced by other activities through which the *mutirantes* can strengthen togetherness. *Assessorias técnicas*, however, often claim that the self-building aspect, however small, is necessary to lower the costs, making units of up to 60m² possible. Seemingly, many present-day *mutirantes* are mainly in it to gain a larger apartment.

Without a doubt, *mutirão* as a collective building endeavour is not anymore what it used to be during its so-called heydays in the 1980s and 1990s. The 'momentum' of radical popular belief in auto-construction has apparently faded to a large extent, undoubtedly mostly under the influence of altering political, economic and cultural circumstances.

Conjoined with a kind of diminishing 'spirit' to engage in cooperative self-construction adventures, also economic changes play an important role. Land is getting more and more scarce and thus expensive, necessitating higher buildings in order to cope with the price of the terrain (Fieldwork, Rizzo, 2015). *Mutirantes* mostly lack expertise in construction works and as projects become larger and higher, specific technical skills become increasingly necessary. Making use of the knowledge of a professional contractor is not an option anymore but it has become absolutely crucial. A few *mutirão* projects already turned into pure self-management projects, outsourcing the works on the construction site completely to a contractor. Often, these projects are referred to as '*mentirão*', a contraction of *mutirão* and *mentir* [to lie], meaning as much as 'fake *mutirão*'. (Fieldwork: Otaviano, 2015; Fieldwork: Canteiro, 2015)

Clearly, *mutirão* is nowadays testing new hybrid constellations of self-management and self-construction in order to 'survive'. While the aspect of self-building is decreasing, self-management stands strong, and many movements try to find a compromising *modus operandi* that balances autonomy with feasibility.





PRESENT PRESENTE

RECALIBRATING MUTIRÃO | *RECALIBRAR MUTIRÃO*
[ANNO 2015]

The former five projects have illustrated fragments of the dynamic and multidimensional history of mutirão in São Paulo. It became clear mutirão finds itself today on a turning point. It seems broadly agreed upon that the heydays of mutirão have passed. The particular practices in the 1980s-1990s were closely related to the broader societal 'momentum' where different popular forces engaged to (re) build a post-dictatorship city and society. Assessorias técnicas as Usina played a crucial role therein to provide the necessary technical support in the design and construction phase of popular building projects, as well as in the intellectual rethinking of architecture as a democratic and decolonized discourse and practice. The mutirão projects hence embodied very much the radical belief in revolutionary, new, participatory ways of producing housing. Per definition, as experimental as they were, each project has been a laboratory for negotiation, struggles, and victories. In many cases, they invigorated the struggle for the right to the city of the low-income population, shifting gradually from a struggle for land to a fight for adequate housing and eventually to the right to take radically part in the imagining and construction of the future city.

Today, the actual will to manually autoconstruct collective housing seems to have ebbed away. The whole MCMV programme has planted a very strong image of social housing as a clear-cut 'casa-propria', easily achievable without the hard labour and endless negotiations that a mutirão project implies. Nevertheless, the 2% of the Programme Minha Casa Minha Vida going to social movements still allows and invites for experimentation with 'other ways' of producing housing. Many movements still refer to those mutirão projects because of the various experiments they involve.

To shed light on the present condition of mutirão in São Paulo, the timeline in this research shifts scale, zooming in from years to months, employing two ongoing projects of Usina. These projects will be used to explain the different phases of a mutirão project in depth. The two projects, named Cinco de Dezembro and Parque São Rafael, are in distinct phases and thus form the ideal base to gain a more complete notion of mutirão in the present-day situation. The following analysis is the result of a close collaboration with Usina and the respective movements. During the fieldwork, the authors have intensively participated in the workshops and construction works of the projects.



5D CINCO DE DEZEMBRO [CONSTRUCTION PHASE]

P. 267

56 FAMILIES | SUZANO - JARDIM NAZARETH

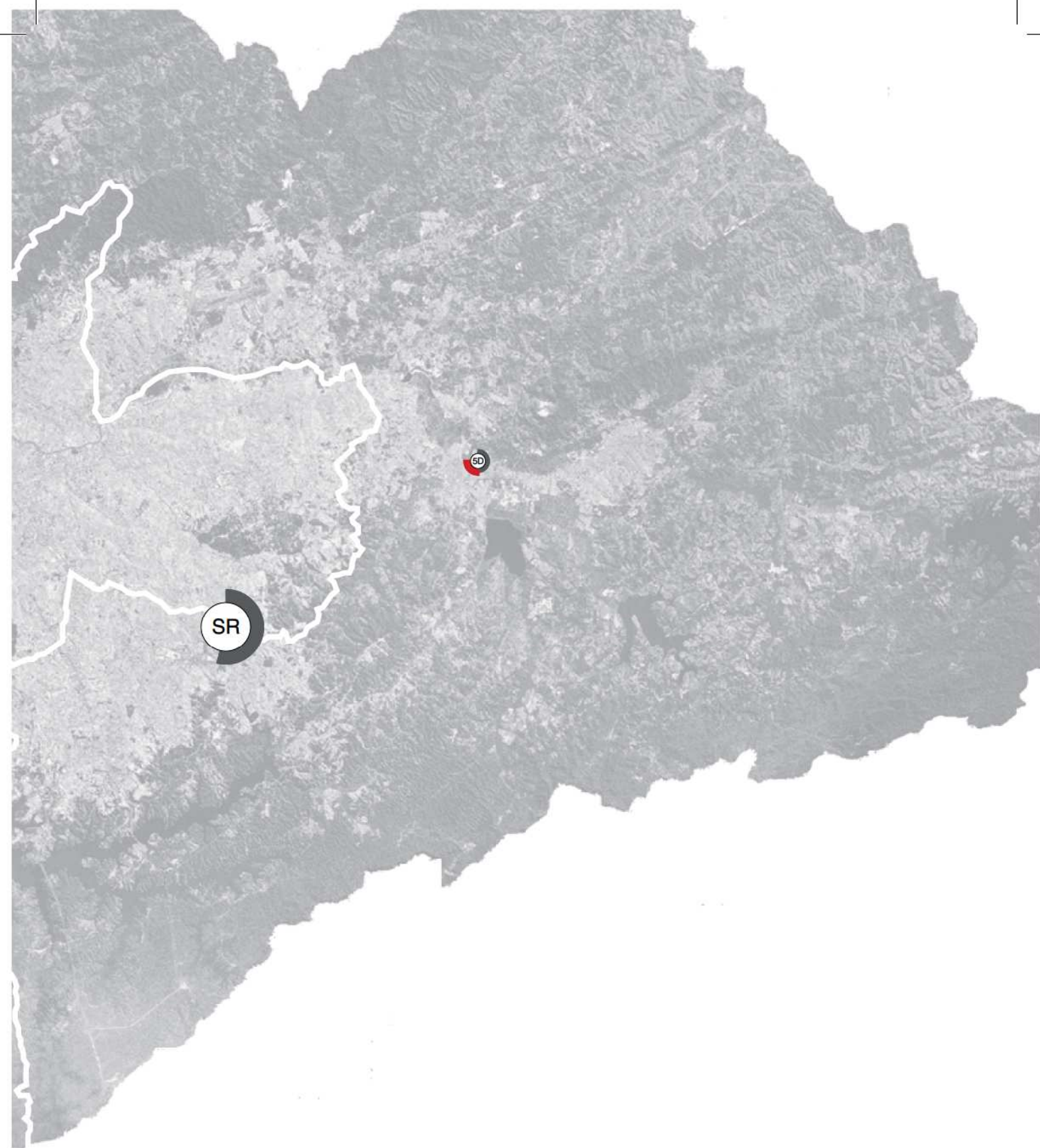


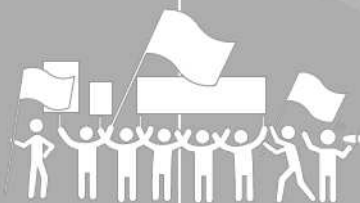
SR PARQUE SÃO RAFAEL [DESIGN PHASE]

P. 227

700 FAMILIES | SÃO MATEUS - PARQUE SÃO RAFAEL







MOVEMENT TIMELINE

01. TERRAIN (P. 235) | TERRENO



ASSOCIATION TIMELINE

02. ASSOCIATION (P. 243) | ASSOCIAÇÃO



PARQUE SÃO RAFAEL

DESIGN PHASE (P. 227)
FASE DE DESENHO



03. PARTICIPATIVE DESIGN PROCESS (P. 247) | PROCESSO PARTICIPATIVO DESENHO

VERTICALIZATION AND INTEGRATION (P. 249)
VERTICALIZAÇÃO E INTEGRAÇÃO



LEARNING ABOUT AUTOGESTÃO (P. 251)
APRENDER AUTOGESTÃO



GENDER AND AGE DISCUSSIONS (P. 253)
DISCUSSÕES DE GÊNERO E IDADE



INTERIORS (P. 255)
INTERIORES



ASSOCIATION CALENDAR

CALENDAR FIELDWORK : DESIGN PHASE | FASE DE DESENHO

17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	01	02	03	04	05	06
07	08	09	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	01	02	03	04
05	05	07	08			



ASSEMBLY COORDINATORS | ASSEMBEIA COORDENADORES



ASSEMBLY WITH ALL THE FAMILIES | ASSEMBEIA COM TODAS AS FAMÍLIAS



5 DE DEZEMBRO

CONSTRUCTION PHASE (P. 267)
FASE DE CONSTRUÇÃO



04. CONSTRUCTION (P. 277) | CONSTRUÇÃO 05. SOCIAL MEETINGS (P. 291) | TRABALHO SOCIAL

CONFIGURATION OF APARTMENTS (P. 257)
CONFIGURAÇÃO DE APARTAMENTOS



COLLECTIVE SPACES (P. 259)
ESPAÇOS COLETIVOS



CALENDAR FIELDWORK : CONSTRUCTION PHASE | FASE DE CONSTRUÇÃO

17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	01	02	03	04	05	06
07	08	09	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	01	02	03	04
05	06	07	08			



SOCIAL MEETING | TRABALHO SOCIAL



ASSEMBLY | ASSEMBLÉIA



CONSTRUCTION | CONSTRUÇÃO



CANCELLED | CANCELADO



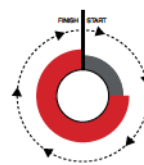
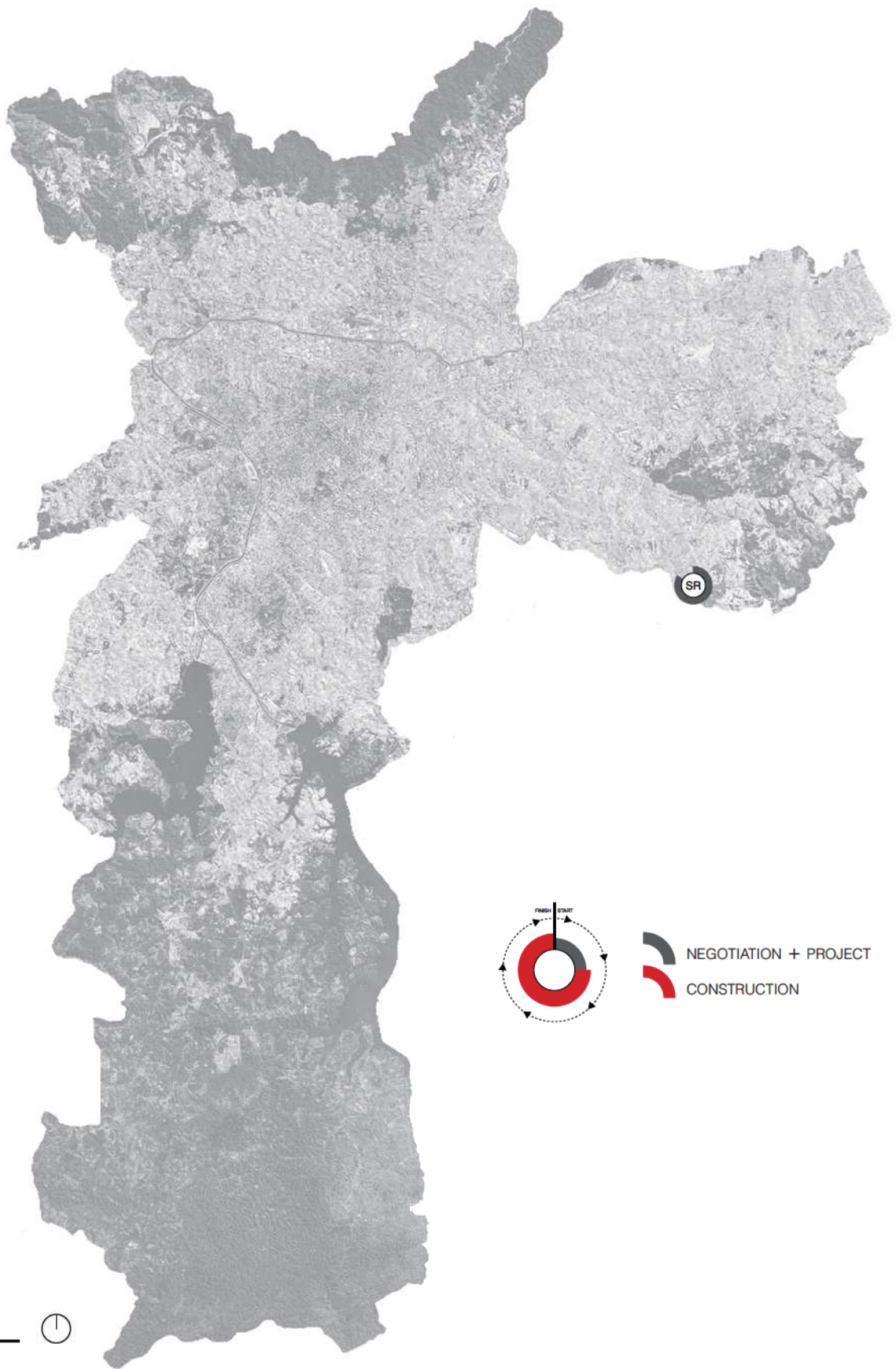
PARQUE SÃO RAFAEL [2014]

DESIGN PHASE | *FASE DE DESENHO*



SOURCE: HABISP





NEGOTIATION + PROJECT
CONSTRUCTION

4 KM





PARQUE SÃO RAFAEL



2014 - ...



SÃO PAULO, SÃO MATEUS



700 FAMILIES



MST LESTE 1



MCMV-ENTIDADES



USINA



CONCRETE



1H40 TO SÃO PAULO CENTRE



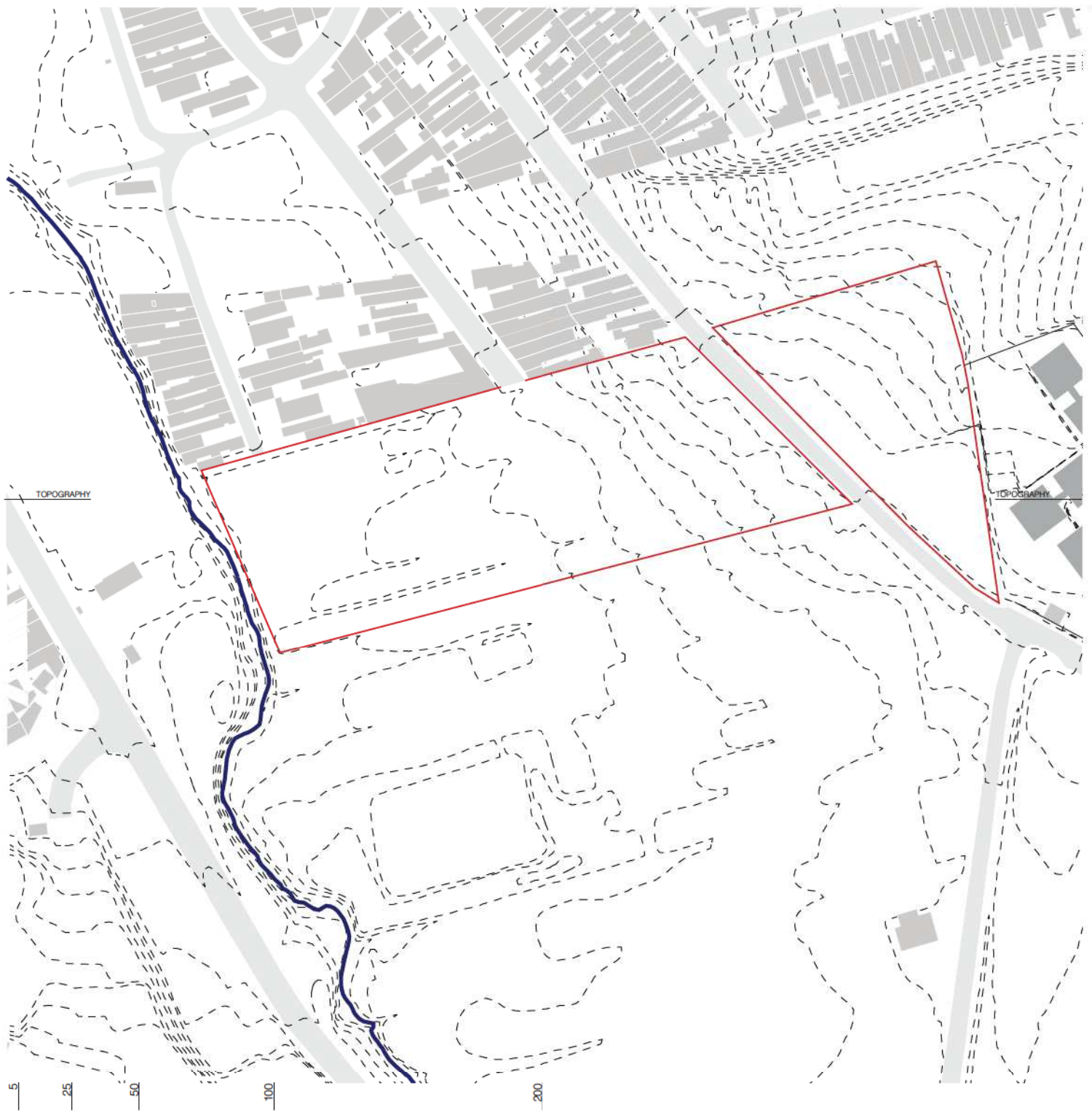
20 458 M²
MEDIUM STEEP TOPOGRAPHY
FLOOR AREA RATIO: 2,7



60 M²
VARYING 8 TO 18 FLOORS
342 UNITS/HA



PARKING COEFFICIENT: 0,35
246 PARKING SPACES



TOPOGRAPHY

SÃO RAFAEL

LOW RISE

HIGH RISE

--- TOPOGRAPHY

RIVER



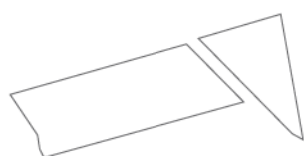
MAP OF THE TERRAIN OF PARQUE SÃO RAFAEL, EDITED BY AUTHORS. MAP BASED ON GOOGLE EARTH AND GEOSAMPA. SLOPE BASED ON GEOCONTEXT



PARQUE SÃO RAFAEL - AT THE FRINGES OF THE CITY

The project in Parque São Rafael has not yet been executed and the terrain has not even been bought, but the design phase is in full progress. Since the struggle of the participative design as it will be explained, could be experienced by the authors themselves, a critical review of the first phases in the mutirão approach could be made.

Parque São Rafael is located at the border of São Paulo's conurbation, 'the periphery of the periphery', with a substantial lack of infrastructure and public facilities. The project will house 700 families divided over two plots. Compared to the formerly discussed projects, this will not be the first project of this magnitude (cfr. Copromo houses 1,000 families), but it will most certainly be Usina's first high-rise project with elevators due to the high density on a relatively small terrain.

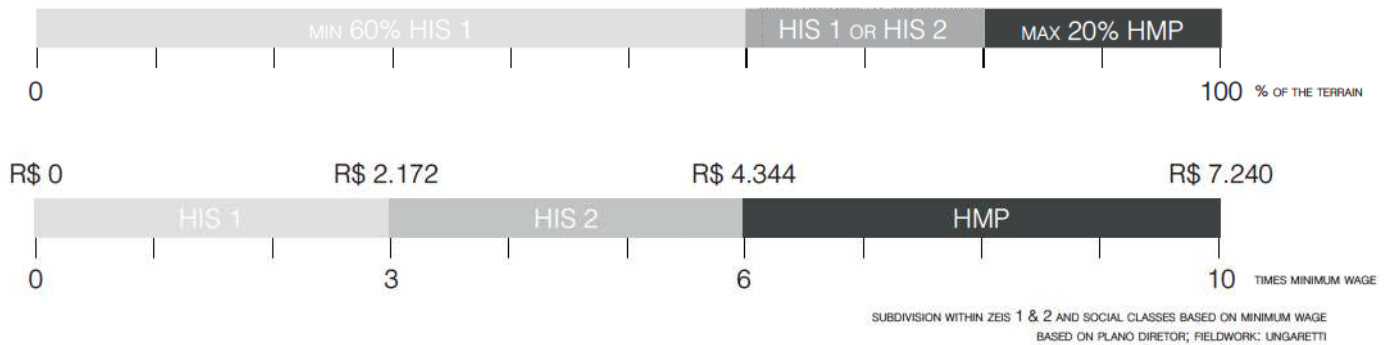


TERRAIN
TERRENO



ENVIRONMENT OF PARQUE SÃO RAFAEL (SOURCE: HABISP)

TERRAIN | TERRENO



Still, obtaining a terrain seems a major challenge in a mutirão process. MST Leste 1 (p. 58) contacted Usina in 2014 to search for a terrain together and found a plot in Parque São Rafael, located on the Eastern border of São Paulo. Unfortunately, up until today, the terrain has not yet been bought due to lack of funding. (Fieldwork, 2015)

The terrain in Parque São Rafael is part of the ZEIS programme; the triangular plot in the North belongs to ZEIS 1 and the rectangular parcel in the South to ZEIS 2. ZEIS 1, on the one hand, refers to areas that are already in use but are under-used. The objective of this zone is to promote land, urbanistic regularization, environmental recuperation and 'habitation of social interest' (HIS) (p. 58) production. ZEIS 2, on the other hand, are plots or lots without buildings that are suitable for urbanization. (Prefeitura da Cidade de São Paulo, 2015)

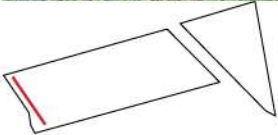
In both ZEIS 1 and ZEIS 2, on lands bigger than 1,000 m², constructions are obligated to offer at least 60% of housing for range 1, being the lowest income class with an income ranging from zero to three times the minimum wage. Further, maximum 20% of the units can be destined for range 3 or the so-called popular habitation market, with income ranging from six to ten times the minimum wage (p. 58). Units for range 2 can be optionally provided. (Lei Municipal 16.050/2014 - Plano Diretor Estratégico - PDE: article 44, §2º; "quadro" 4; article 46; article 55). In the case of mutirão projects, the terrain is completely destined for range 1.

According to *Plano Diretor* (Prefeitura da Cidade de São Paulo, 2015), ZEIS-terrains are 'well-localized areas' and to retake Friendly's words: "In a context where the poor have often been pushed to the fringes of cities, this tool is an exceptional achievement" (Friendly, 2013, p. 165).

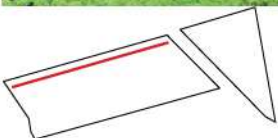
Although, this 'triumph' should be seen in nuanced light. In the case of Parque São Rafael, the terrain borders a variety of urban contexts. To the north-west of the terrain, consolidated fabric with small-scale housing forms the border. On the east side, typically closed condominiums with H-shape blocks neighbour the terrain. The view to the south, on the other hand, is characterized by a totally different context. On this side, a range of petrochemical factories is located, which turn into a fire and smoke spectacle during the night. It calls amazement and wonder as well as disgust.

One could wonder if living next to these factories is healthy, not to mention the significant noise and smell from the factories (Fieldwork, 2015). It could also be questioned why the movement doesn't opt for another terrain, but in reality, there aren't many options and the movements take the changes that come along (Fieldwork: Germano, 2015). Areas with some degree of urbanization are namely rather scarce, and not only desired by movements but also by construction companies. The struggle for land is hence a rather unequal competition, due to the considerable advantages for the second agent, with more power, more financial possibilities and freedom (Fieldwork: Barbosa, 2015). Social movements are thus left with the poorest served areas in terms of social infrastructure and public services, at the fringes of the city.

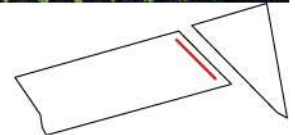
The movement, on the contrary, believes that this quarter offers actually a lot of possibilities. According to MST Leste 1, the prefeitura is investing in this upcoming neighbourhood and the presence of schools and public transport is improving, compared to other peripheral areas. (Fieldwork: Oliveira, 2015)



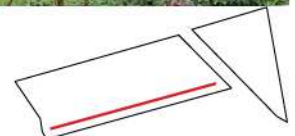
WEST VIEW (2015)



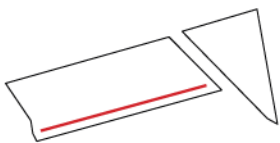
NORTH VIEW (2015)



EAST VIEW (2015)



SOUTH VIEW (2015)



SOUTH VIEW OF THE TERRAIN BY NIGHT IN PARQUE SÃO RAFAEL (2015)

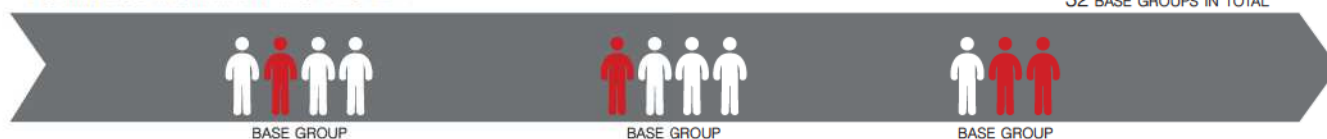




ASSOCIATION
ASSOCIAÇÃO

FORMATION MOVEMENT MST LESTE 1

32 BASE GROUPS IN TOTAL



FORMATION ASSOCIATION PARQUE SÃO RAFAEL







PUNCTUATION INDIVIDUAL



-  **OCCUPATION**
+ 15 PTS + 5 PTS/DAY
-  **EXTERNAL ACTIVITIES: DEBATES**
+ 05 PTS
-  **ORIGIN GROUP MEETING**
+ 01 PT
-  **BRINGING COMPANION(S) TO CERTAIN ACTIVITIES**
+ 02 PTS/COMPANION
-  **CONTRIBUTION PAYED ON TIME**
+ 01 PT
-  **PARADE**
+ 10 PTS
-  **TO BRASILIA**
+ 10 PT + 5 PT/DAY

PUNCTUATION BASE GROUP



-  **OCCUPATION**
+ 01 PT/PERSON + 01 PT/PERSON/DAY
-  **EXTERNAL ACTIVITIES: DEBATES AND FORMATIONS**
+ 01 PT/PERSON
-  **COORDINATION MEETING**
+ 10 PTS
-  **PARADE**
+ 01 PT/PERSON

BASED ON FIELDWORK AND INTERNAL REGULATIONS OF MST LESTE 1 (2015)

FORMATION AND PUNCTUATION | FORMAÇÃO E PONTUAÇÃO

Although the terrain in Parque São Rafael has not yet been bought due to funding issues, MST Leste 1 already initiated the next step in the *mutirão* process: the formation of the association. It's namely necessary to decide which and how many families out of MST Leste 1 will be able to participate in the *Mutirão* project. Due to a strict system, based on points, the participants for the upcoming *mutirão* project are chosen. The price - and the area - of the terrain determine how many families have to participate in order to cope with the cost of the terrain, taken into account that no more than 15% of the funding can be used for the purchase of the terrain (Fieldwork: José Rodolfo Pacheco Thiesen, 2015).

How unfortunate it may sound, the amount of participants is thus merely the result of a purely mathematical calculation. In this project, the amount of families was set on 700. Regarding this large amount, the families were divided into three groups, named: Jerônimo Alves, Dorothy Stang and Martin Luther King. Altogether, this selection of families forms the new association Parque São Rafael.

In order to comprehend how an association is formed and which families are chosen to engage in the project, it is necessary to understand the internal functioning of MST Leste 1. MST Leste 1 namely consists of 32 base groups, each linked to a specific region in Zona Leste. Many of these base groups are strongly associated with a conjuncture of the Basic Ecclesial Communities, linked to the Catholic Church (Ikuta, 2013; Da Silva Telles, 1989, p. 177). These base groups form the foundation of MST Leste 1, *"the gate to enter the struggle, where they begin to discover how to conquer land and transform the individual need into collective and political demand"*¹ (Ikuta, 2013, p. 77, translated by author)

Currently, to form a base group the participation of at least five families is required and should not exceed the number of 100. Otherwise, a new base group has to be created to cope with the overload of people. (Fieldwork: Oliveira, 2015)

Within the movement and its base groups, everything is based upon routine participation. Going from demonstrations over meetings and assemblies to occupations, every act of participation is rewarded in a score proportional to the importance of the activity (Fieldwork: Oliveira, 2015). The most 'dedicated' families earn thus the most points and reach the top of the ranking.

Furthermore, not only as a family points have to be earned, but also as a base group points are important. The latter points are calculated proportionally to the amount of people in a base group. Base groups on top of the ranking have for example a larger share in the amount of families that can participate in the upcoming project. After the formation of every new association, the points of the base groups are reset (MST Leste 1, 2014).

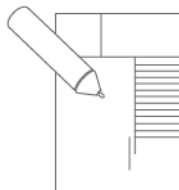
Participation is thus most certainly a key word when coping with movements. All actions and interactions on different scales and levels are calculated using a rational counting system with immediate consequences for the participants. As such, it is thus not sufficient to exclusively be present in the assemblies of the association and the movement, rather people *have* to participate in marches and occupations, all adding up to a higher score, aiming for the top of the ranking. Following from this, families with less 'social backup' who are for this reason unable to participate in all the activities, remain on the bottom of the ranking, ergo in the struggle for many years.

Even after the selection and formation of the association, the ranking continues. The families highest on the ranking list can namely choose first their apartment once the project is finished (Fieldwork: Oliveira, 2015). Anew, affirming that engagement in a movement is fully based on the concept of participation.

In order to 'encourage' the participants and assure transparency, MST Leste 1 digitalized all the information of their adherents, showing the points of each family online. Every family can thus see its score in relation to the other families. Besides motivation and transparency, the digitalisation awakens competition as well, but according to the movement, competition is merely a strong expression of motivation. (Fieldwork: Oliveira, 2015)

The newly formed association Parque São Rafael proverbially splits now off from the track of MST Leste 1, ready to start their own history and that for what they were in it from the beginning; an own house.

¹ "A porta de entrada para a luta, onde começam a descobrir como conquistar a terra e a transformar nossa necessidade individual em demanda coletiva e política." (Ikuta, 2013, p. 77, translated by author)



PARTICIPATIVE DESIGN PROCESS *PROCESSO PARTICIPATIVO DESENHO*

“DOES MY KITCHEN HAVE A WINDOW?” - “MINHA COZINHA TEM UMA JANELA?”

With a newly formed association and the promise of terrain, the next step in the mutirão process is launched and MST Leste 1 contacts Usina in order to elaborate a design for the intended terrain in Parque São Rafael. Usina developed a very specific participative design approach over the years, involving the future inhabitants, but since including the whole association on all meetings would be very complex and rather inefficient, the assemblies are held with only a part of the *mutirantes*, appointed as responsible. Important to notice is that the association is definitely not a client of Usina, but more a kind of partner. According to both 'partners', that's the only way how an answer to the needs of the residents can be found and standardized solutions can be replaced. The participative design process for mutirão Parque São Rafael started in November 2014 and was still in full progress while fieldwork was conducted. (Fieldwork, 2015)



PLAYING ARCHITECTURE | JOGAR ARQUITETURA

P. 249



LEARNING SELF-MANAGEMENT | APRENDER AUTOGESTÃO

P. 251



GENDER AND AGE | GÊNERO E IDADE

P. 253



INTERIORS | INTERIORES

P. 255



BUILDING-SET ARCHITECTURE | PRÉDIO-SET ARQUITETURA

P. 257



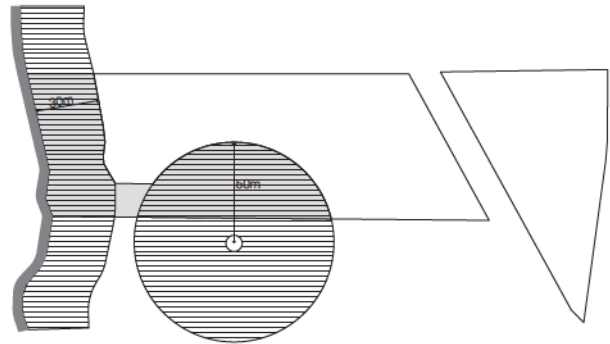
COLLECTIVE SPACES | ESPAÇOS COLETIVOS

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UNDERSTANDING THE LIMITATIONS OF THE TERRAIN AND BUILDING THE SENSE OF VERTICALIZATION THROUGH A GAME OF ADDING RULES AND RESTRICTIONS (SOURCE: USINA)

PLAYING ARCHITECTURE JOGAR ARQUITETURA



The first step in the participative design process is to collectively create a vision for the future project, going hand in hand with building a sense of verticality and consolidated buildings that are in high contrast with the *mutirantes'* current dwellings, Usina challenges the future inhabitants to reflect on the social and functional aspects of their dwelling practices so far and on how they would like to improve them. The *mutirantes* can, therefore, choose out of various pictures of different collective housing projects to support the *mutirantes* in the translation of their thoughts, their wishes, and dislikes into words. Through a group discussion, collectively a vision for their future project is gradually formed. (Usina, 2015; Arantes, 2013)

Once the first sense regarding the concepts of verticalization and consolidation is built, further elements, related to the terrain, are taken into account to form an actual and visualised idea. Usina, therefore, expounds the territorial study with the limits of the terrain and a model of the terrain is shown to explain the topography. Given limitations of the terrain such as the river and the hidden water source, Usina is obligated to let specific parts of the land uncultivated and verticalize the upcoming project even more. To let the *mutirantes* themselves come to that insight, Usina guides them in the restrictions by playing a game of stacking volumes and adding new prerequisites (such as a floor-over-terrain-coefficient or amount of parking spots) in each round, verticalizing the project step by step. (Usina, 2015)



CAPACETES COLORIDOS (2015)

LEARNING SELF-MANAGEMENT APRENDENDAR AUTOGESTÃO



Participating in a *mutirão* project, always includes variable degrees of *autogestão*. This means that the association is in charge of the organization and the management. As such the association has complete autonomy over design and construction as an equivalent partner of Usina, but also over the organization, the management, and the budget. During the entire process, going from plan layout to the colour or size of the brick, the association has the final say. This gives a feeling of freedom to the *mutirantes*, but also hampers the whole process of self-management very much. Long assemblies and overheated discussions can cause the necessary commotion, often resulting in slander. Not only the design process itself but even more the organisation and the management of the construction site will be extremely demanding for the *mutirantes*. The participants, therefore, have to understand very well in which process they are getting themselves involved. To prepare themselves for this aspect of *mutirão*, Usina shows a documentary named '*Capacetes coloridos*' that explains in an understandable and straightforward way that everybody has its own important and different function within a *mutirão* project, yet equally important (Constante, 2007). "We have to remember that all of us have the same rights and duties and that the assembly is the collective place for decisions." ¹ (Usina(2), 2015, p. 1, translated by author)

¹ "Devemos nos lembrar que todos nos temos os mesmos direitos e deveres e que a assembleia é o espaço coletivo de decisão." (Usina(2), 2015, p. 1)



WOMEN BETWEEN 20-60 YEARS OLD (2015)

GENDER AND AGE DISCUSSIONS

DISCUSSÕES DE GÊNERO E IDADE



The groundwork of the participative design process is laid and, with everybody steadfast to persevere, the 'real' designing can begin. As most participants are not familiar with architectural design, Usina starts the design phase with an element that is common for everyone: one's own dwelling. In the search for the needs and the desires for their future apartment, the *mutirantes* of Parque São Rafael are divided into different age and gender groups. Women in general attached more importance to the kitchen while men emphasized leisure spaces. (Usina, 2015; Arantes, 2013)

TOPICS:

1. KITCHEN
2. LIVING ROOM
3. BALCONY
4. BEDROOMS
5. BATHROOM
6. LAUNDRY
7. BETWEEN THE SPACES

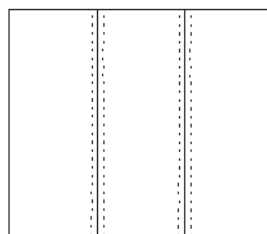
GROUPS:

YOUTH	< 20 YEARS
WOMEN	20 - 60 YEARS
MEN	20 - 60 YEARS
ELDERLY	> 60 YEARS

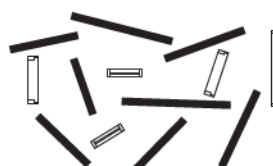


ARRANGING FURNITURE AS DEPARTURE POINT FOR THE APARTMENT (SOURCE: USINA)

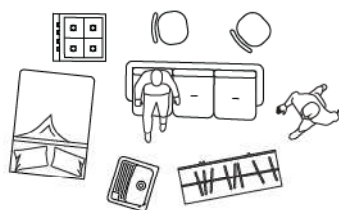
INTERIORS INTERIORES



MAGNETIC BOARD



WALLS



FURNITURE

Following the needs and the desires from the previous step, the future inhabitants of Parque São Rafael deal with the layout of the apartment. This is done by using a magnetic board with applicable furniture, walls, doors, and windows. The families are free to arrange layouts without any limitations. Next, a standard 44 m² plan from the *Minha Casa Minha Vida* programme (p. 196) is given to the families, challenging them to rearrange their previously made layout within the restricted area (Usina, 2015). As they try to fit the magnetic furniture in the rooms, the families realize that it is too limited and almost impossible, “families thought the plan was printed ‘on another scale’ or that the furniture was too big, and got frustrated.” (Arantes, 2013, p. 9).

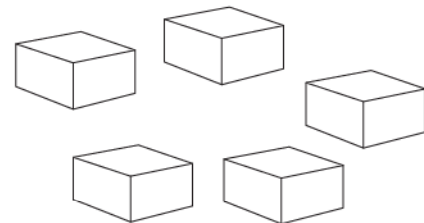
Participants become aware of the fact that not all their wishes and configurations are possible. They feel they have to give in and agree with each other to accomplish the final layout of the apartment (Usina, 2015). These collaborative sessions allow the *mutirantes* to gradually discover the limits and possibilities of the project while discovering as well the first internal disagreements and the importance of compromises.



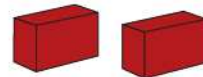
MUTIRANTES DISCUSSING AND REFLECTING ON THE SET UP OF APARTMENTS AND THE CIRCULATION, WITH GUIDANCE OF USINA (2015)



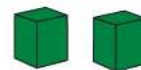
BUILDING-SET ARCHITECTURE PRÉDIO-SET ARQUITETURA



APARTMENTS

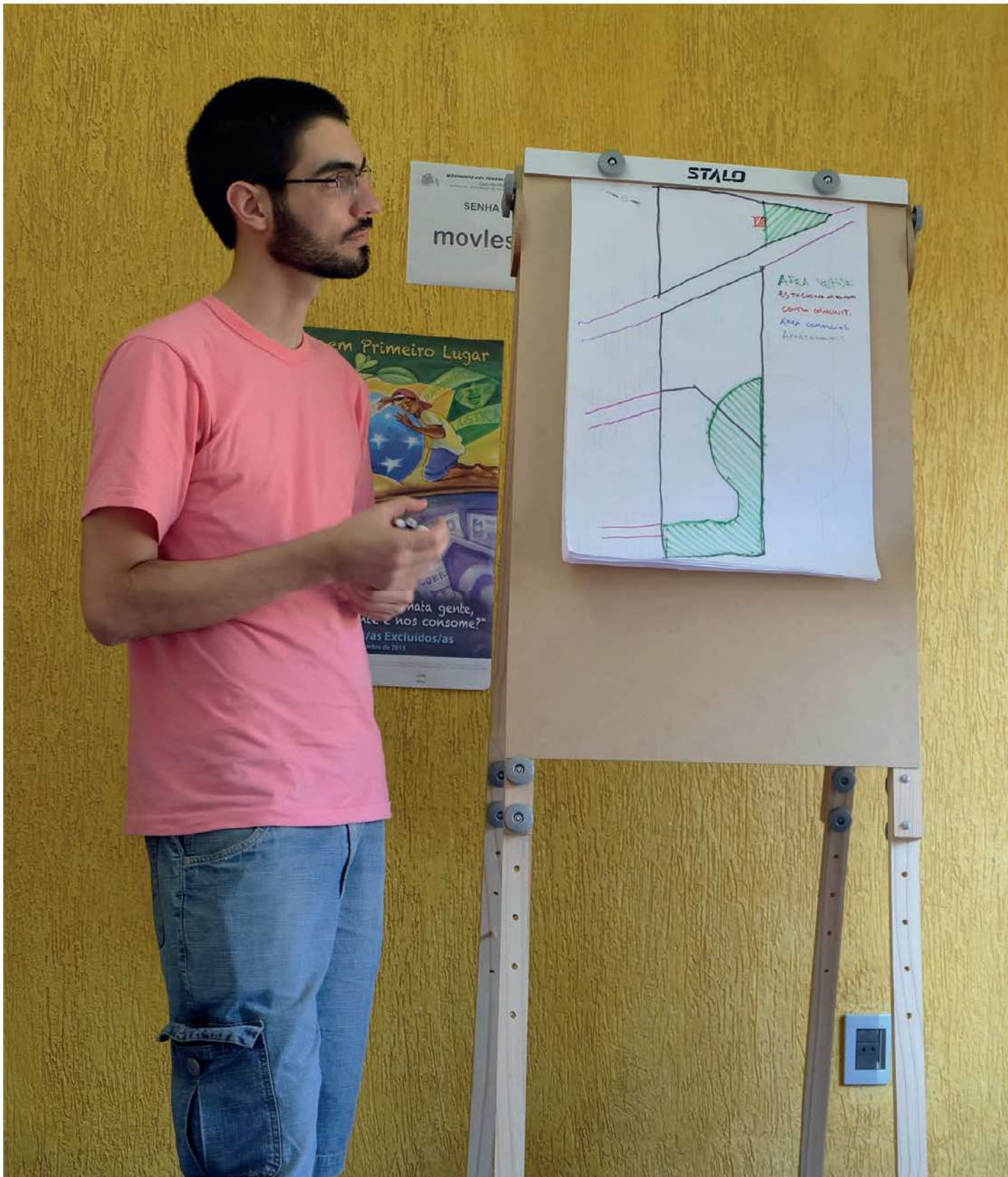


STAIRS



ELEVATORS

After creating a typology on which all the families can agree on and that stays within the boundaries of the feasible, the configuration of the units is discussed in the next assembly. With blocks in different colours, the *mutirantes* can start stacking and composing possible circulation possibilities between the apartments. The topic seems to gradually fade away from the *mutirantes'* dwelling experiences, and their capacity and interest clearly moves further from their comfort zone. (Fieldwork, 2015)



MUTIRANTES DISCUSSING AND REFLECTING ON THE LAYOUT OF THE TERRAIN ITSELF AND THE INTERACTION WITH THE ENVIRONMENT, WITH GUIDANCE OF USINA (2015)

COLLECTIVE SPACES

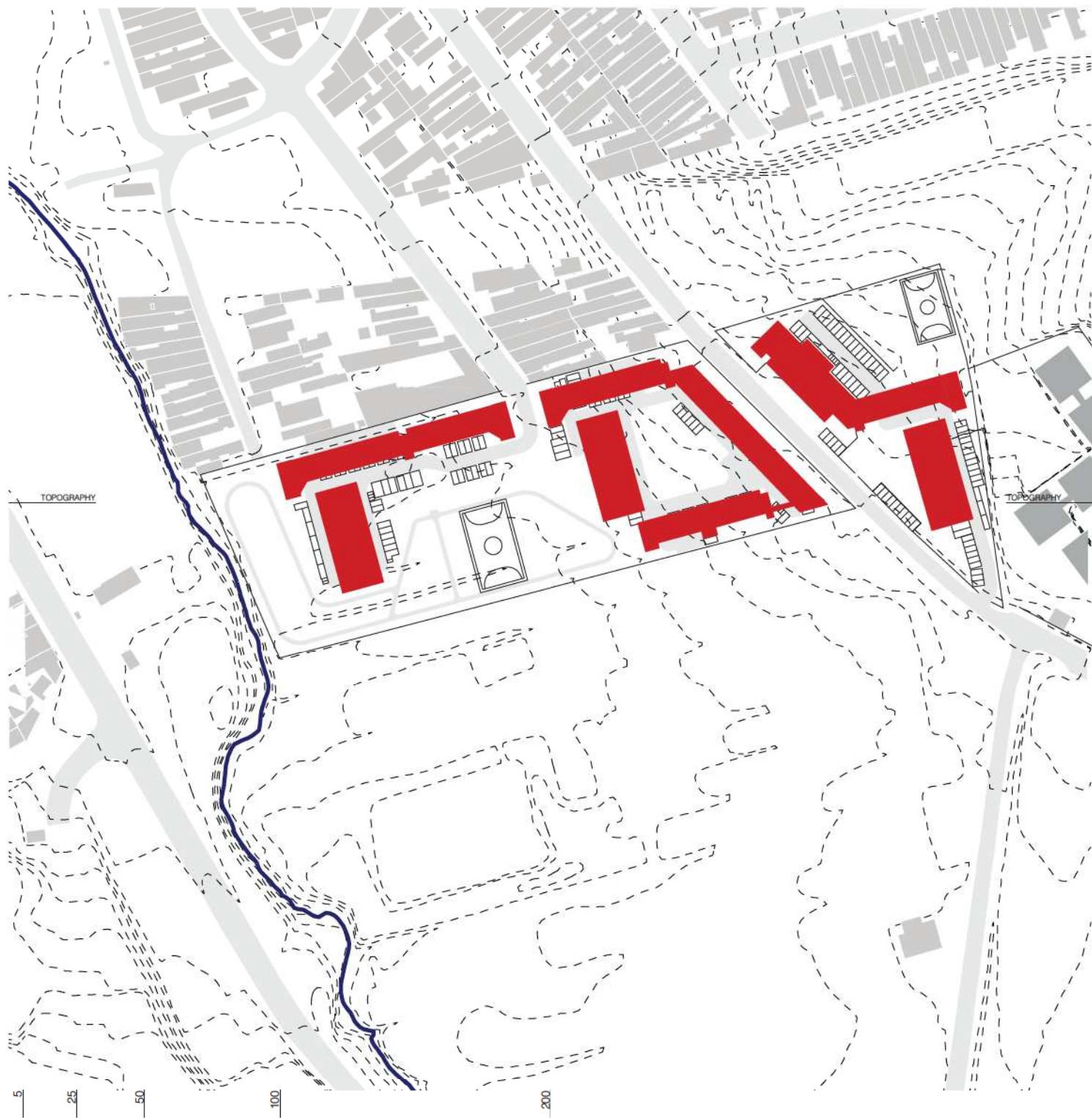
ESPAÇOS COLETIVOS

The next assembly zooms even more out, focussing on the layout of the terrain itself and the interaction with the environment. A lot of the future inhabitants are completely disorientated when it comes to the location of the buildings on the plot. Although time is taken to discuss the terrain and the possibilities, it is significant to mention that almost none of the future inhabitants have ever visited the terrain or seen a picture of the surroundings. (Fieldwork, 2015)

After a long day of participation, the only question that arises, is: "Will my kitchen have a window?". Almost like a time capsule brought back to the very first step of the participative design process, showing once again how demanding and difficult the participative process is. (Fieldwork, 2015). As Usina zooms out with every step, going from the masonry block to eventually the setup of the clusters around the communal area, the larger scale seems to fall behind with most of the *mutirantes*. The design starts from "inside out" implying that out of the unit the rest of the project arises. Even at the end of the process, the *mutirantes* are still holding on to something they know and want, namely a dwelling.

The question rises if it wouldn't be more efficient and require less time if Usina would keep the design phase more 'compact' instead of holding on to a participative process from the beginning until the end. In proliferating debates on participation, the difficulties encountered while zooming out from the dwelling unit to the urban layout raises multiple questions about the limits of design 'by' and 'with' people. Surely, involving a 'community' of 700 families in an unsure design scheme is ambitious. Nevertheless, the resulting sense of belonging and attachment to the design product is surely noteworthy.

Being too far from the *mutirantes'* living environment and creating fear for the strange, unknown people that might tread 'their terrain', the provision of public functions turned out to be the hardest phase in the participative design. Because the *mutirantes* lack knowledge about collective spaces, Usina provides them with insight that little interventions could improve the living environment in a housing project. They try to show the association that public functions are important on top of the movement's pure 'housing, housing, housing'-policy. The continuing battle between movement/association and Usina is exhausting for both parties, so by visiting finished projects Usina tries to convince new groups. In a finished 'successful' project, Usina can show that even little interventions are improvements. Usina knows their architecture has to remain 'banal' or at least low-cost, because of the strong focus on housing, but the little improvements, however small, make it worth the try and the struggle.



TOPOGRAPHY

SÃO RAFAEL

LOW RISE

HIGH RISE

TOPOGRAPHY

RIVER



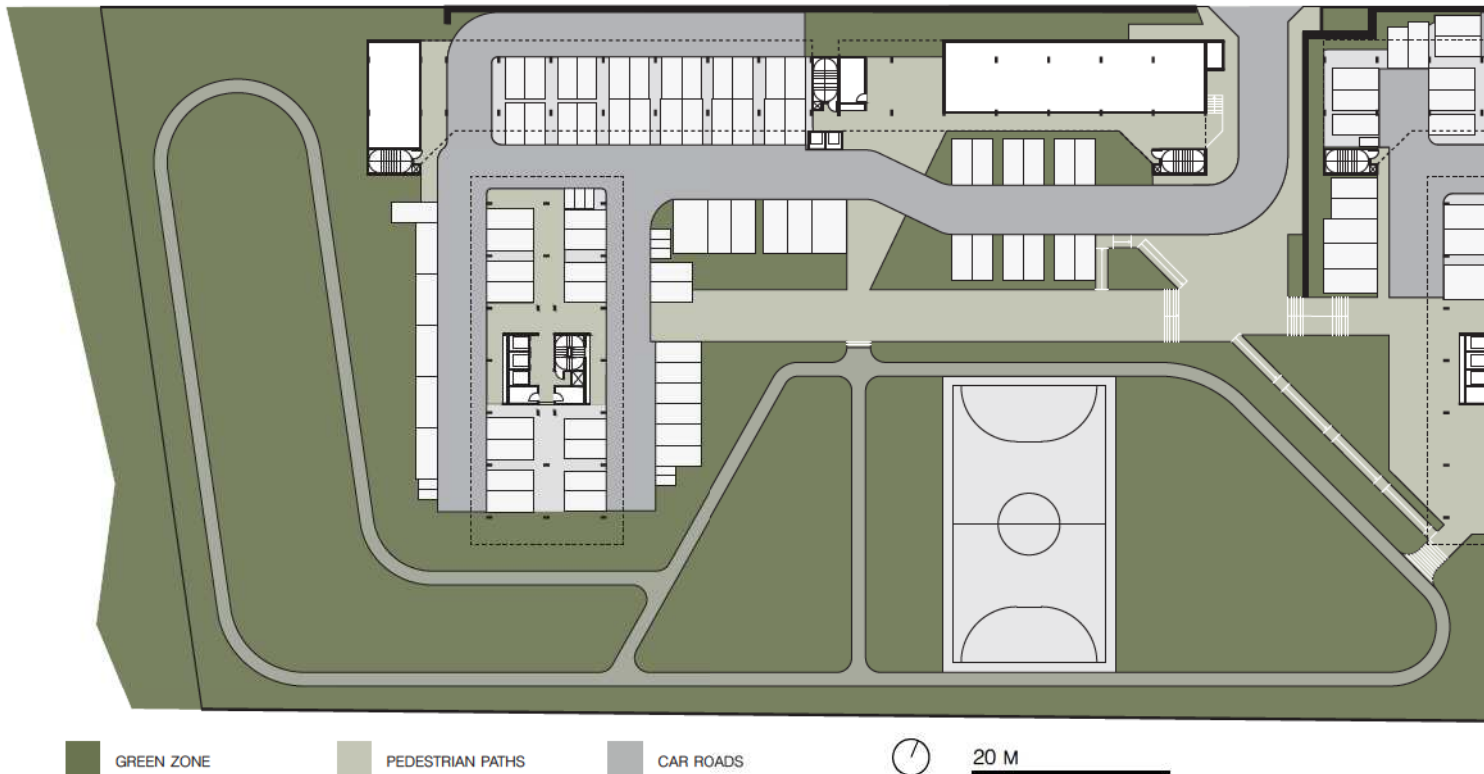
MAP OF PARQUE SÃO RAFAEL, EDITED BY AUTHORS. MAP BASED ON GOOGLE EARTH AND GEOSAMPA. SLOPE BASED ON GEOCONTEXT



PARQUE SÃO RAFAEL - CONTRASTING SCALE

Concluding the several steps in the participative design process of Usina together with the future inhabitants of the project in Parque São Rafael, Usina made a design proposal. This design is submitted to the prefeitura in anticipation of the approval to buy the terrain, get funding and start the construction works.

Within the context of ZEIS, Usina's design to house 700 families in the project of Parque São Rafael results in high-rise buildings. Three towers of 18 floors are centrally positioned and surrounded by other dwelling blocks up to 9 floors. The amount of floors is in high contrast with the environment, but the increasing prices of terrains oblige to build this high.



The buildings are lifted by columns to release the ground floor, providing parking area, circulation possibilities, accesses to the dwellings and common facilities. Two community centres and three common areas will serve the inhabitants but in general, a strong presence of parking lots is noticeable on the ground level. The restricted zones due to the river in the West and the water source in the South cannot be built. Instead of this, a walking and running path together with a basketball pitch will form the green area of the rectangular plot. The other plot is also equipped by a basketball pitch.

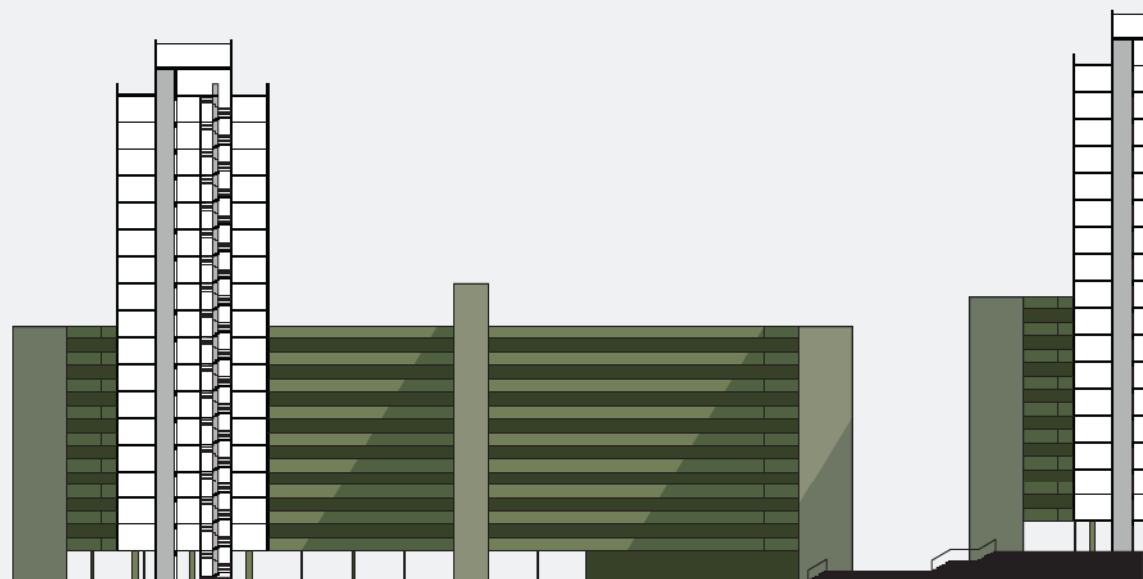
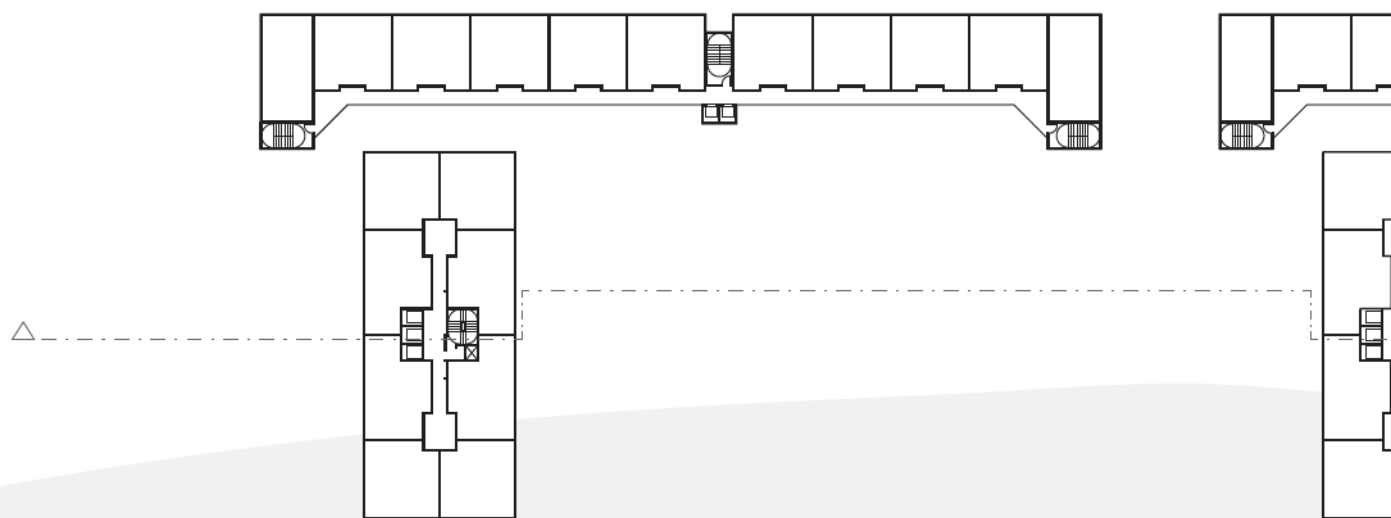
Usina tries as much as possible to border its terrain by the buildings in order to avoid a conjunction of walls and fences. They manage to do this mainly at the streetside. However, the community centres facing this street are accessible for the entire environment, which creates a sudden openness to the outside.

As in many other projects, entrances for the inhabitants are done by gates guarded by a porter. After entering, the external circulation on the plots is strictly split up for pedestrians and cars, creating safe walking zones and a clear road for cars guiding to the parking lots. Internal circulation is diversified by an enclosed circulation inside the towers and external access corridors for the medium-high blocks. These paths force people to do an external walk to their front door, resulting in living facades.

The layout of the typologies is comparable with earlier projects, offering averagely 60m² to the families. The dwellings of the medium-high buildings have two external facades, of which one is connected to the access corridor, while the units of the towers only have one, east or west.

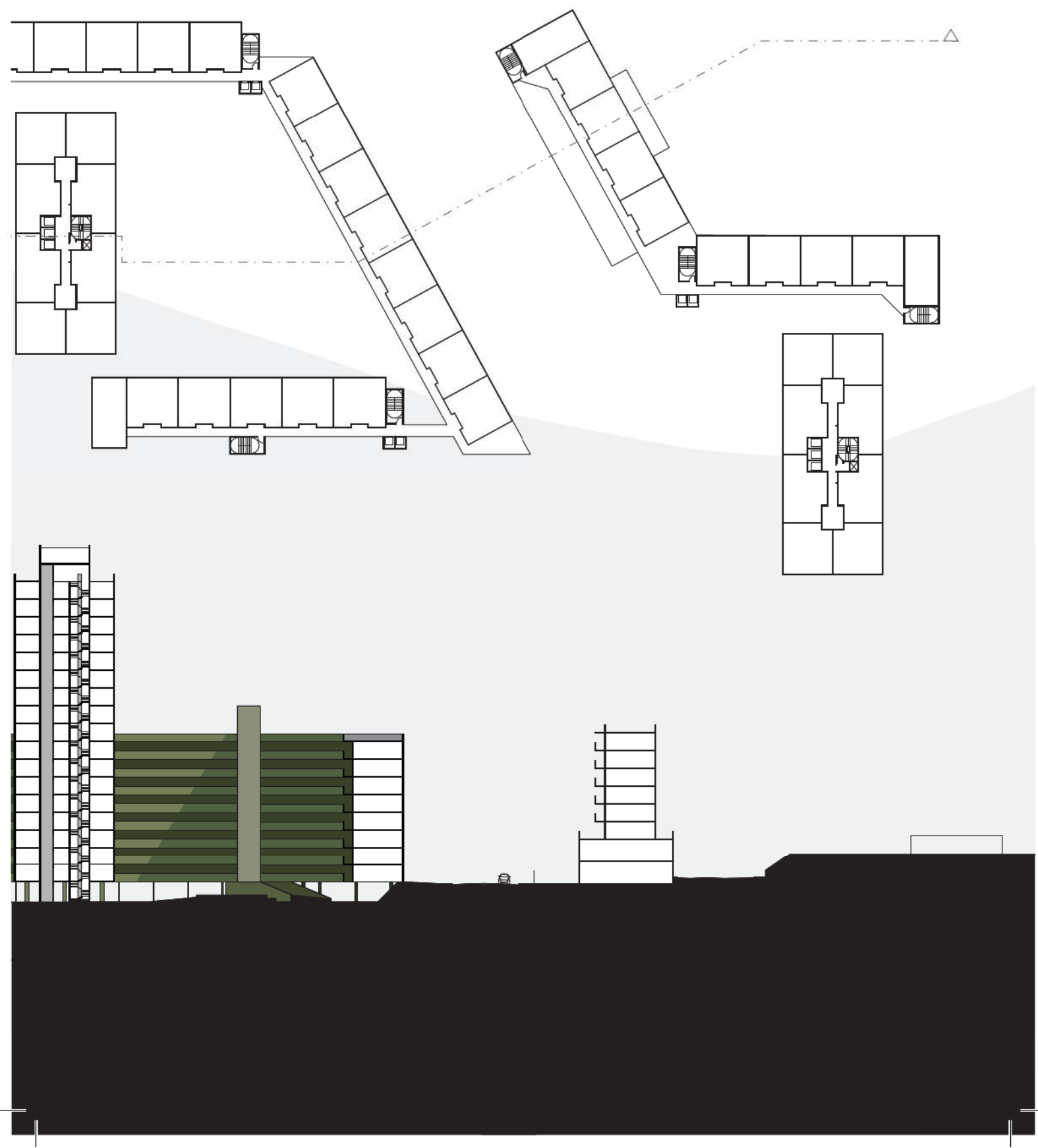
Considering the height of the buildings in a contrasting urban context with many empty plots, provided for the habitation of social interest (ZEIS), it can be assumed that the project of Usina sets an example for the 'quarter to be' and the high rise trend could be followed in upcoming projects. Further explanation is followed in Chapter III. Future.





PARQUE SÃO RAFAEL: PLANS AND SECTION
20 M

EDITED BY AUTHORS, BASED ON PLANS AND SECTIONS OF USINA





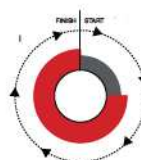
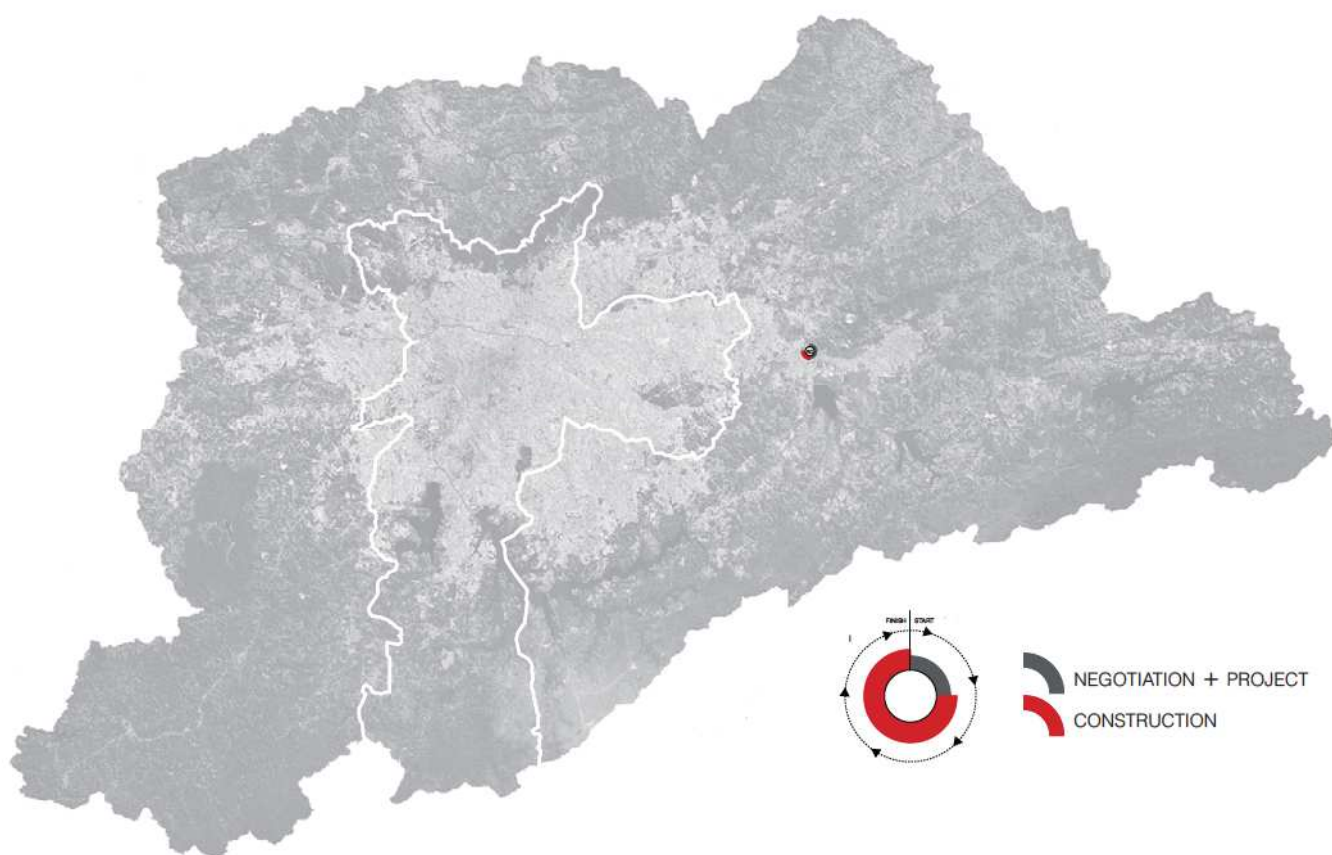
CINCO DE DEZEMBRO [2010]

CONSTRUCTION PHASE | *FASE DE CONSTRUÇÃO*

After the design, if all the steps in the earlier phases are accomplished, the works on the construction site can be initiated. Besides a few recent exceptions, participating in a mutirão project still intrinsically encompasses self-building and collective work on the construction site. The case of Cinco de Dezembro in Suzano, in construction phase while fieldwork was conducted, will further expound the next steps in the contemporary mutirão project.







NEGOTIATION + PROJECT
CONSTRUCTION

25 KM





CINCO DE DEZEMBRO



2010 - ...



SUZANO, JARDIM NATAL



56 FAMILIES



ASSOCIAÇÃO DE MORADORES DO JARDIM MIRIAM E ADJACÊNCIAS (UMM)



MCMV-ENTIDADES



USINA



SELF-BEARING CERAMIC BLOCKS
METALLIC STAIR CASES



2H TO SÃO PAULO CENTRE



4 200 M²
EVEN TOPOGRAPHY
FLOOR AREA RATIO: 1,52



58 M²
VARYING 3 TO 5 FLOORS
133 UNITS/HA



PARKING COEFFICIENT: 0,5
28 PARKING SPACES



TOPOGRAPHY



CINCO DE DEZEMBRO



LOW RISE



HIGH RISE



UNCULTIVATED LAND

--- TOPOGRAPHY



MAP OF CINCO DE DEZEMBRO, EDITED BY AUTHORS. MAP BASED ON GOOGLE EARTH. SLOPE BASED ON GEOCONTEXT.

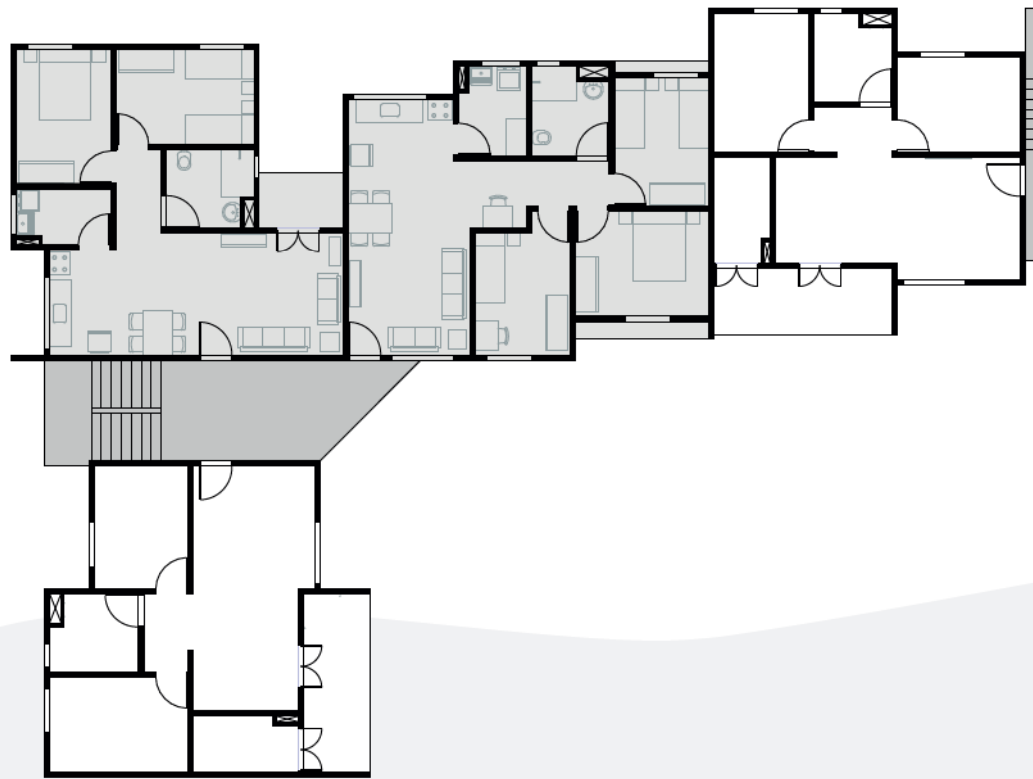
SUZANO - A BORDERING MUNICIPALITY OF SÃO PAULO

The construction works of Cinco de Dezembro started in December 2014 and during the period of fieldwork the *mutirantes* were working on the excavation of the foundations. The project is located in Suzano, a municipality to the east of São Paulo. Suzano relies, though independent, on São Paulo for many facilities and services.

Cinco de Dezembro was designed along with Tania Maria, both projects from the same movement *Grupo de Moradia do Jardim Natal*. The construction works of Cinco de Dezembro started in December 2014, Tania Maria has until today not yet started.

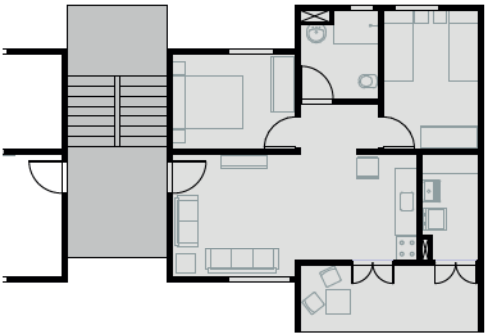
56 families are engaging in the mutirão project of Cinco de Dezembro. The design process started in May 2010 and along the discussions three separate units were thought of, containing two or three bedrooms. One of the three typologies even includes a large balcony. The project consists of five buildings that vary in height between 4 and 5 floors. All the buildings are clustered around a collective central square. On top, some roofs are designed as regular roofs but are configured as green roofs. Usina utilised the same building technique that had already proven to be very useful in Copromo (p. 93) and União da Juta (p. 121).

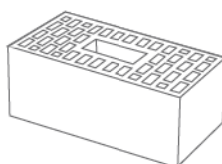
Furthermore, the buildings that face the street are provisioned with facilities, ranging from a shop over a bike repair to a bakery. These features offer not only urban quality but also jobs for the inhabitants of the mutirão project. By adding 'more' to the project, the design seeks to move beyond the standard housing project.



CINCO DE DEZEMBRO: PLAN AND SECTION
4 M

EDITED BY AUTHORS, BASED ON PLANS AND SECTIONS OF USINA



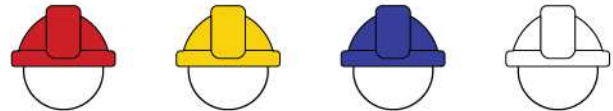


CONSTRUCTION SITE
CANTEIRO



COLOURED HELMETS AT WORK - NORMALLY ONLY TWO OUT OF THE THREE TEAMS WORK ON THE CONSTRUCTION SITE. HEAVY RAINFALL DURING THE WEEK OBLIGATED THE THREE TEAMS (RED, YELLOW AND BLUE) TO WORK THAT DAY ON THE CONSTRUCTION SITE IN ORDER TO MOVE THE WORKS UP A NOTCH (2015)

CAPACETES COLORIDOS AT WORK | CAPACETES COLORIDOS NO TRABALHO



CAPACETES COLORIDOS AT WORK

To ease the organization and the works on the construction site, the families are divided into 'task groups', or so-called '*brigadas de mutirantes*'. These task groups are split up into three teams - red, yellow and blue following the colour of their helmet. The task groups make use of a rotation system, as such each Sunday, two out of the three teams work on the construction site and one team has the weekend off.

During the week companies are contracted. The contractor, needing helping hands to assist on the construction site, hires some of the *mutirantes* to work on weekdays. In the past, an important part of the work was done by the *mutirantes* themselves, but in a current *mutirão* project, the *mutirantes* do 5 to 10 percent of the entire work by working one day a week on the construction site.

As in every closely collaborating group, difficulties arise. There are always people who work harder than others and some *mutirantes* clearly have more difficulties with the fact that some people do a lot and other people hardly do anything. Since troubles have to be avoided as much as possible, strict rules are set and missing construction days is not accepted. An attendance record is filled in at the beginning and at the end of the working day and arriving late is noted. Multiple notes can result in an exclusion from the *mutirão* project.

Without rules, it is never possible to get the job done and mutual respect is essential in this aim. Clear, strict rules are absolutely necessary in the aim for their objectives and to interpret the vital regulations, each participant received an illustrated booklet with the regulation - *Regulamento de obras* - that explains in clear language the different tasks that need to be done and the rules each and every one of the *mutirantes* is subjected to (Usina(2), 2015).



THE KITCHEN TEAM PROVIDES MEALS FOR ALL THE MUTIRANTES. THE LUNCH IS NOT ONLY A WELL DESERVED BREAK FROM THE WORKS, BUT ALSO A SOCIAL HAPPENING (2015)



PRINCIPLES FOR BETTER CONSTRUCTION AND LIFE

PRINCÍPIOS PARA UMA OBRA E VIDA MELHOR

In the internal regulation, a strong focus is put on the equality of the group and the aversion of hierarchy. *"In mutual help, we are going to work together and support each other (...). We are a community!"*¹ (Usina(2), 2015, p. 1, translated by author). This focus on equality and support for one another teaches *mutirantes* to respect each other and to form a close group, strengthened by the communal struggle and goal.

Besides the '*brigadas de mutirantes*', each *mutirante* is also part of an *autogestão* committee. These *autogestão* committees carry out complementary services for the works on the construction site. The tasks of these *autogestão* committees are very diverse, ranging from cooking and child care, over safety and good behaviour to finances to communication, with something for everyone.

After the contentions, long design and decision-making process, full of discussions and disputes, an even more difficult phase commences, filled with hard physical labour and unexpected setbacks, such as heat waves, heavy rainfall and delays in funding. Taken the hard work and perseverance into account, it is most striking to know that some *mutirantes* only engage in order to sell their apartment afterwards. This raises many questions and has a harmful effect on the spirit within the *mutirão* group.

¹ "Em ajuda mutua, vamos cooperar, apoiar um ao outro (e rodiziar as tarefas para criar uma corrente de aprendizado). Seremos uma comunidade!" (Usina(2), 2015, p. 1)



ESCAPING THE SUN AND THE HEAT DURING THE HARD WORKS ON THE CONSTRUCTION SITE (2015)



MOVING THE EXCAVATED EARTH TOWARDS THE PILE (2015)



THE "WATER LADY" PROVIDES WATER FOR ALL THE MUTIRANTES AND MAKES SURE THAT EVERYBODY DRINKS ENOUGH (2015)



IMPROVISING A PATH FOR THE WHEELBARROW (SOURCE: JEROEN STEVENS, 2015)



A MEMBER OF THE KITCHEN TEAM ANNOUNCING THE LUNCH TIME (SOURCE: JEROEN STEVENS, 2015)



THE LUNCH TIME IS NOT ONLY A WELL DESERVED BREAK FROM THE WORKS, BUT ALSO A SOCIAL HAPPENING (SOURCE: JEROEN STEVENS, 2015)



MUTIRANTES RETURNING TO THE HEADQUARTERS FOR A "WORD WHEEL" (RODA DE PALAVRA) WHERE THE MUTIRANTES CONCLUDE THE DAY (SOURCE: JEROEN STEVENS, 2015)



MUTIRANTES CLEANING THE TOOLS AT THE END OF THE DAY AND TO USE THEM AGAIN THE NEXT WEEK (2015)



SOCIAL MEETING
ASSEMBLÉIA



SOCIAL MEETING WITH THE MUTIRANTES OF CINCO DE DEZEMBRO (2015)

SOCIAL MEETING | ASSEMBLÉIA



Often decisions are made on a larger scale but affect - indirectly - the *mutirão* project. As such, pauses, resumes, and difficulties due to higher level politics or economics damage the dynamics within the *mutirão*. In order to prepare and educate the *mutirantes* about this, the programme *Minha Casa Minha Vida* (p. 196) obligates '*trabalho social*' (literally: social project) as a condition in order to gain funding. The social project presents guidelines and actions, aiming at strengthening the participation, the association, and the citizenship. Through social activities, information about their rights and the sharing of ideas related to urban interventions, these social projects aim to stimulate the social, political and economic awareness of the *mutirantes*. (Fieldwork, 2015)

In total five social meetings are planned, each with a specific topic going from democracy over rebuilding the city to the force and impact of social movements. The topics not only contribute to the understanding of the struggles upon which *mutirão* projects *will* venture but even more importantly, make the *mutirantes* aware of their rights and what they are entitled to.

The social meetings educate the *mutirantes*, building a society in parallel with housing. This adds to the double importance of the autonomous construction process as a pragmatic answer to a housing question and a parallel 'societal' process of empowerment, gaining autonomy and gradually shedding off the oppressive yoke of paternalistic housing production models. (Freire, 1968; Turner, 1976).

With trial and error, backbreaking labour and contentions negotiations; *mutirão* still attempts to concurrently build a more qualitative dwelling environment for the lowest income class, and an empowered community able to directly claim rights to the city.



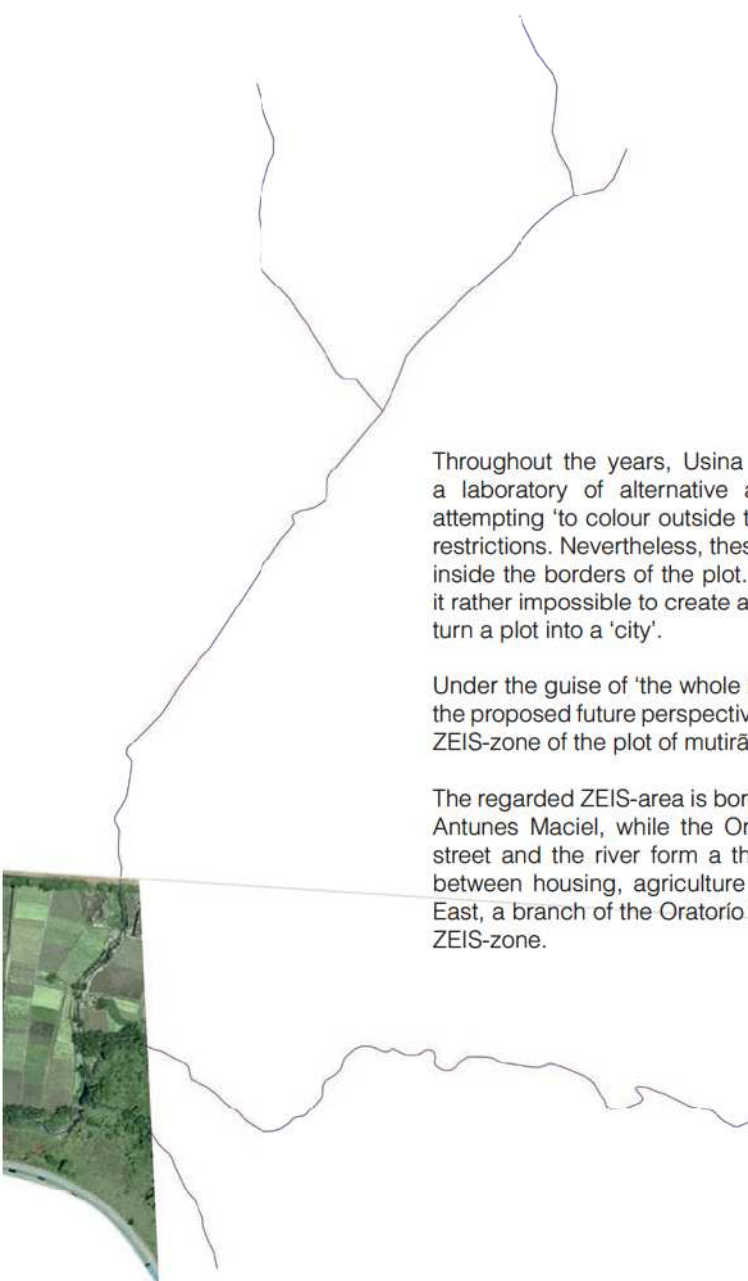
FUTURE FUTURO

ENVISIONING A FUTURE FOR PARQUE SÃO RAFAEL
PREVENDAR UM FUTURO PARA PARQUE SÃO RAFAEL
[2016 ONWARDS]

As learned from the previous chapters, the evolution of mutirão is significant and mutirão seems to find itself on its tipping point. More and more, this very distinctive way of developing a low-income housing project becomes restricted by rigid and standardised regulations. Meanwhile, also social movements and assessorias técnicas increasingly doubt the benefits of complete self-managed and self-constructed projects.

VENTURING BEYOND BORDERS - ZEIS
SE AVENTURAR ALÉM DAS FRONTEIRAS

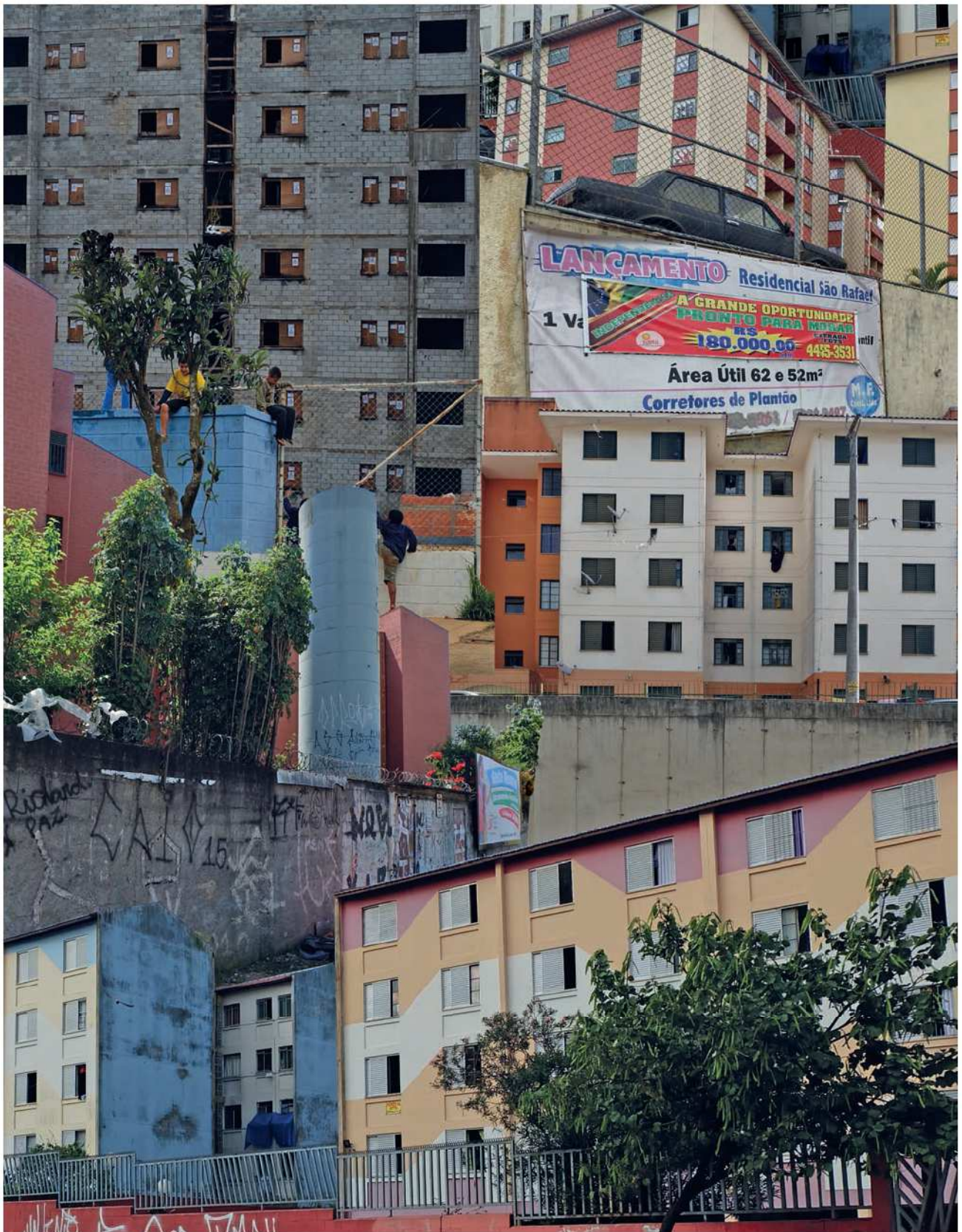




Throughout the years, Usina and mutirão stated themselves as a laboratory of alternative architectural and societal models, attempting 'to colour outside the lines' within the box of rules and restrictions. Nevertheless, these experimental ideas always remain inside the borders of the plot. This kind of scale, however, makes it rather impossible to create a real urban impact. It's impossible to turn a plot into a 'city'.

Under the guise of 'the whole is greater than the sum of the parts', the proposed future perspective zooms out and takes the bordering ZEIS-zone of the plot of mutirão Parque São Rafael into account.

The regarded ZEIS-area is bordered in the North by the street João Antunes Maciel, while the Oratório river bounds the South. The street and the river form a thin line, creating an area of tension between housing, agriculture and petrochemical industry. In the East, a branch of the Oratório forms the boundary of the regarded ZEIS-zone.



COLLAGE OF CLOSED COMMUNITIES

What if the strict regulations and limitations of ZEIS continue? What if its quota-fulfilling rules are maintained?

With all the strict parameters, rules and regulations, the ZEIS-zone will transform over the years into a monotone, social housing complex. The entire ZEIS-zone will be seeded with housing and merely housing. These housing complexes surrounded by walls, fences and (the aspirations of) a portaria will form the visionary of the ZEIS-zone of Parque São Rafael.

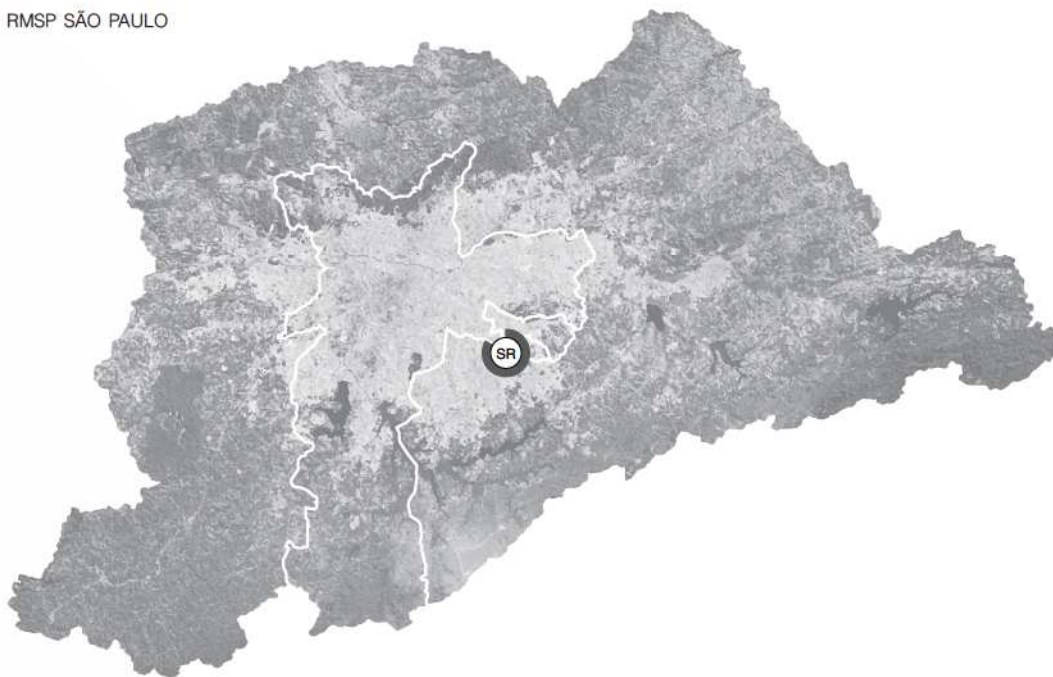
The regulations of ZEIS don't provide facilities nor public spaces. Only the inhabitants or the construction companies can decide whether they insert facilities inside their plot or not. With as result the creation of introvert facilities, only facing their own inhabitants. Furthermore, this ZEIS-zone will cause a vast increment of families living in Parque São Rafael. How will the neighbourhood cope with all the needs of these new families? Where will all the children go to school? Where will be space for leisure and activities?

The rules and regulations make it impossible for the fringes of São Paulo to become part of the city, yet remaining monotonous housing complexes. The spatially and socially consequences of the current legislation will translate into fenced privateness, among other social housing blocks.

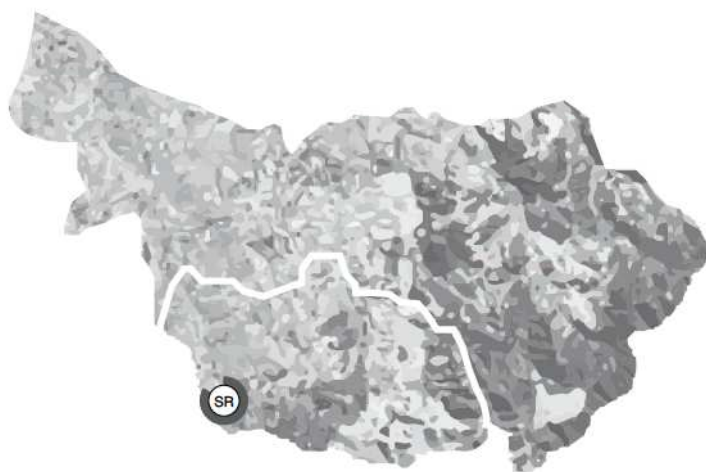
What if these regulations are thrown overboard? What if ZEIS wouldn't be a list of 'do's and don'ts' or a mere list of numbers and minima? What if ZEIS would rather be a vision plan, a larger scale design that takes the bigger picture into account? What if ZEIS would provide a fixed urban frame, leaving space for interpretation at level of blocks and buildings? How is it possible within the rules of play of ZEIS to provide qualitative housing and public space and facilities? With a variety of possibilities and scenarios, giving the chance to let life take over? On different kind of scales, ranging from unit, over street, to neighbourhood and community.

CONTEXTUAL FRAMING - ZEIS
ENQUADRAMENTO CONTEXTUAL

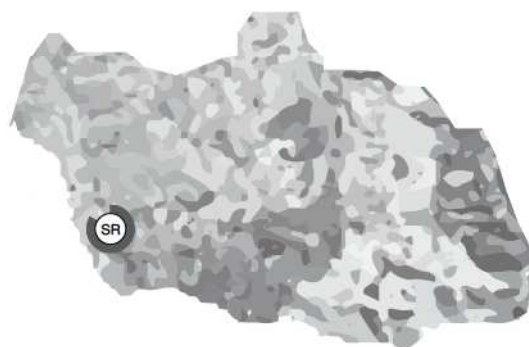
RMSP SÃO PAULO



SUBPREFEITURA SÃO MATEUS



DISTRITO SÃO RAFAEL



ON THE FRINGES OF THE PERIPHERY | NA BORDA DA PERIFERIA

Parque São Rafael, as mentioned in the previous chapter, is a district of subprefeitura São Mateus, located in the east zone of São Paulo. It can be seen as the 'periphery of the periphery', at the boundary of the urbanised area of São Paulo, handling a specific context.

São Paulo - City | *Cidade*

Economic centre, cultural centre, leisure facilities

Travel time: 1h42 by public transport

São Mateus - Subprefecture | *Subprefeitura*

Shops, restaurants, work

Travel time: 24' by public transport

São Rafael - District | *Distrito*

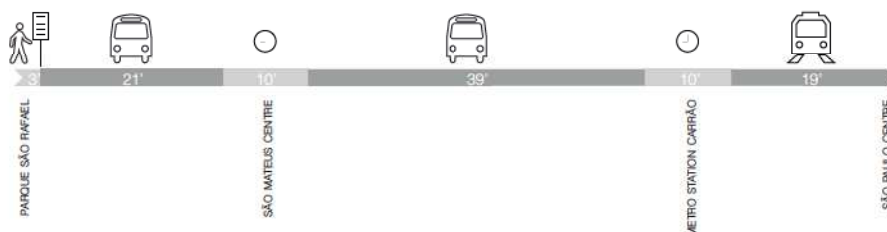
Small shops and snack bars

Travel time: 10' walking

Parque São Rafael - Quarter | *Bairro*

Bars

Travel time: 3' walking



TRAVELLING DISTANCE FROM PARQUE SÃO RAFAEL TO SÃO PAULO CENTRE, BASED ON FIELDWORK



PARQUE SÃO RAFAEL, BASED ON PREFEITURA



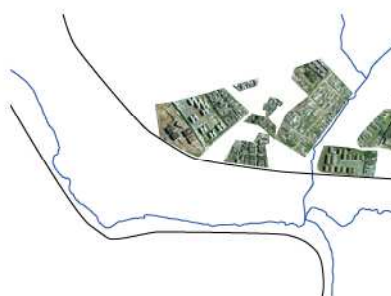
CROSSPOINT OF VARIETY | *PONTOS DE CRUZAMENTO DA VARIEDADE*



CONSOLIDATED FABRIC



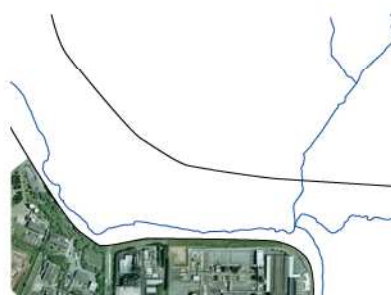
GREEN GASZONE



ISLANDS



AGRICULTURE



PETROCHEMICAL INDUSTRY

THE AREA OF PARQUE SÃO RAFAEL IS CHARACTERIZED BY FIVE MAIN CONDITIONS.



DEVELOPED TISSUE IN SÃO MATEUS (2015)



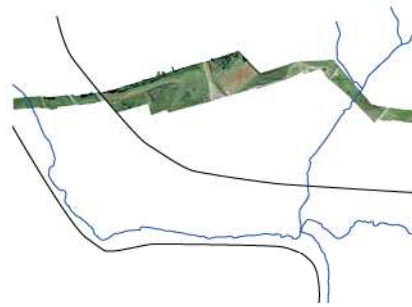
CONSOLIDATED FABRIC

The city of São Mateus has developed from the centre out, stretching itself towards its periphery. The best-known housing typology characterises itself by one to three stories, containing a garage for a car that most people do not own. In the most adjacent streets to the plot of Usina, sewage is provided and streetlights enlighten the neighbourhood during nights, but in the alleys at the border of the river, the provision of infrastructure stays very low because none of the houses is formalised yet.

Being non-formalized, a large amount of houses have taken the opportunity to extend their dwelling to the back to offer more housing space for family members or possible tenants. The location on a slope enables additional buildings in a row, all accessible from the front by entering narrow stairs in between the housing units on the street. (Fieldwork, 2015)



GASZONE OF PETROBRÁS IN SÃO MATEUS (2015)

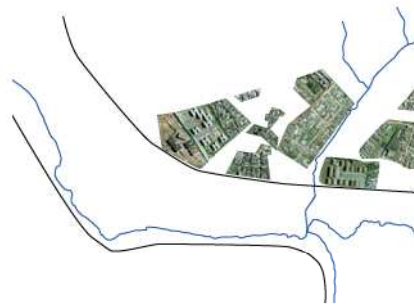


GREEN GASZONE

The consolidated fabric of São Rafael is bordered by a 'green ribbon', housing the gas lines of Brazilian company Petrobrás. The gas lines departure from the petrochemical industries, heading to Rio de Janeiro, and the rest of Brazil. The green strip is obligated to remain uncultivated due to risk.



SOCIAL HOUSING BLOCK IN THE PERIPHERY OF SÃO MATEUS (2015)



ISLANDS

Behind the gaszone, in more peripheral areas, the expansion of housing dwellings has continued. On the one hand, non-regulated favelas can be found, while on the other hand brand new social housing blocks can be seen. This development has manifested itself in small islands, not being able to connect and create coherence between the small-scale houses and the six-story high social housing blocks.



MAN WORKING ON THE FIELD IN PARQUE SÃO RAFAEL (2015)

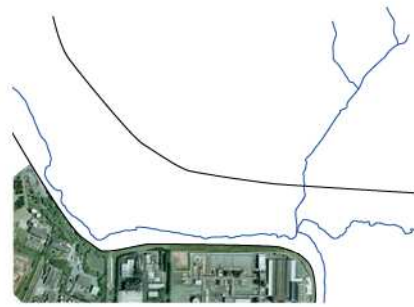


AGRICULTURE

The east zone of São Rafael is bordered by the Oratório river that meanders through the landscape, serving as ideal provision of irrigation for the agriculture in the area of the basin of Tamanduateí. Between the built islands and empty plots, remnants of agriculture are still present in the landscape. This focus on agriculture and self-production will remain important in the further considerations.



PETROCHEMICAL INDUSTRY OF SANTO ANDRÉ (2015)



PETROCHEMICAL INDUSTRY

On the opposite side of the river, in the neighbouring prefeitura, Santo André, large petrochemical industry of Petrobrás takes over the landscape. A spectacle of smoke and fire calls interesting sights and forms a peculiar perception of the surrounding.

URBAN SCALE DESIGN SCENARIO | ZEIS 2.0
CENÁRIO DE DESENHO EM ESCALA URBANA

Alternative by design

Designs will be tested as valuable means to unfold critical reflections on the past and present condition of mutirão as a particular approach to design and construct, as a way to explore new modes of 'doing' mutirão, and as an attempt to actively contribute in the ongoing participatory process carried out by Usina and MST Leste 1. In particular, the design exploration seeks to inform the participatory process with larger urban-scale design scenarios, imagining a social housing production that embraces the agency of social movements while emphasising the importance of design.

An alternative future for Parque São Rafael has been envisioned in which mutirão can find its place. The aim of this design is the creation of an open layout for the Zeis-zone-to-be that involves public functions for the whole neighbourhood. All the former discussed mutirão projects (as well as the present day project in Parque São Rafael) are introvert and act as gated communities with local public functions that only serve the inhabitants of the community. The attempts to add internal functions are a good start, the best possible way within the restrictions that have to be followed, but what if a more utopian view for the neighbourhood could be thought of? What if large zones were considered as an open plot, not bordered and without the provision of gated communities? What could Parque São Rafael become then?





THE PROPOSAL | *A PROPOSTA*

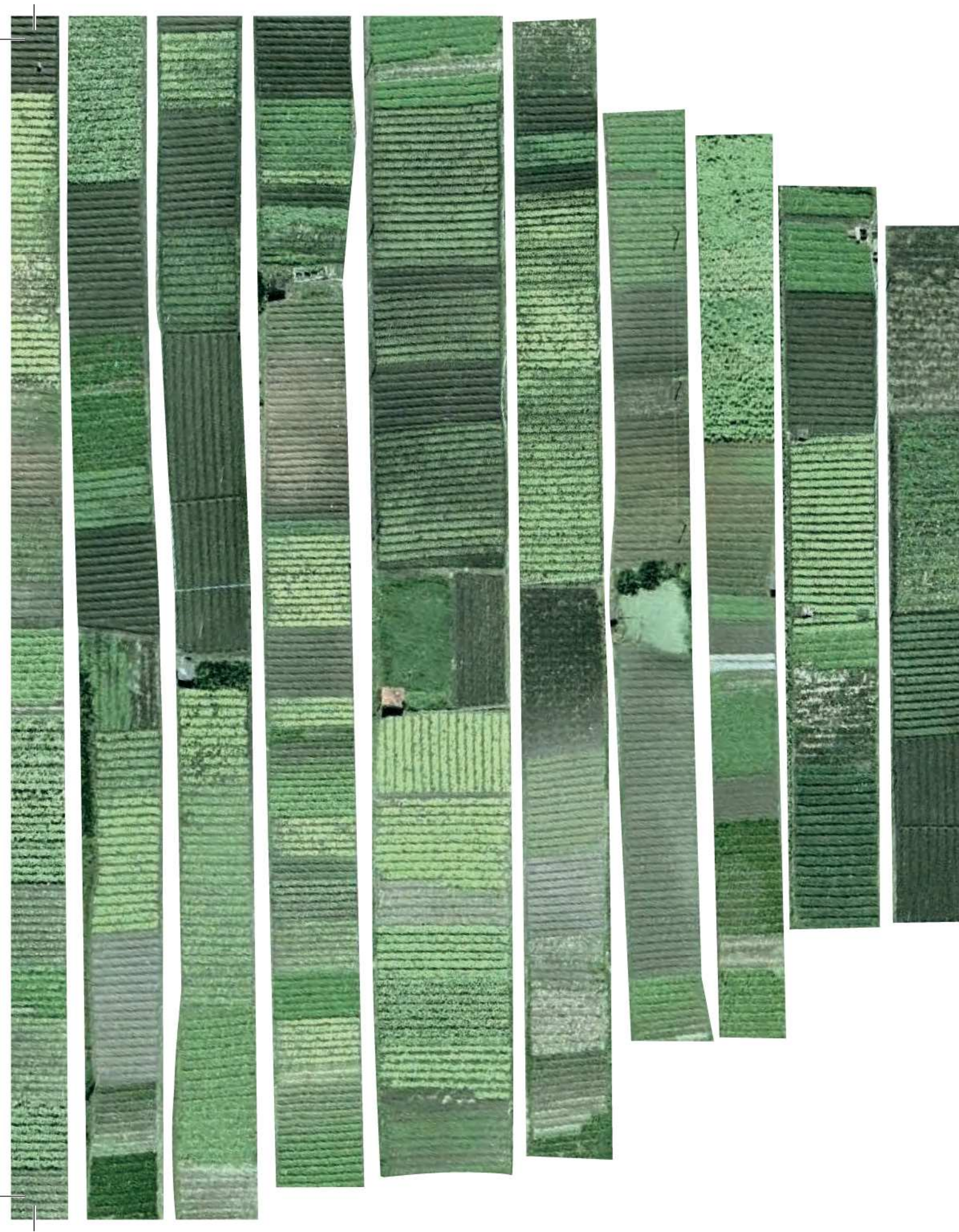
Due to Plano Diretor (p.195) 30 metres on each side of the river have to remain uncultivated, forming a linear park along the river. The ZEIS-zone will attach itself to the linear park, defined by Plano Diretor. The linear park will be provisioned by a walking and bicycle road, forming a safe and pleasant connection between the bus station in the Northwest, the ZEIS-zone in the Southeast, and everything in between. The ZEIS-'park' is completely fordable by public.



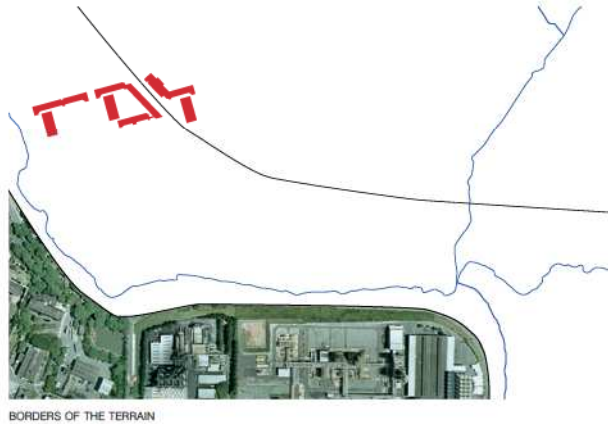
PRESENT-DAY CONTEXT | *CONTEXTO ATUAL*

The plot that is taken into account is destined as ZEIS 1, meaning a large empty piece of land, meant to provide social housing for the lowest social classes. The present-day context is ruled by agricultural activities, mostly fields full of lettuce. Since the trend in social movements is to provide a self-productive system within a parallel society, the focus on self-production is maintained and encouraged by the design proposal, using it as a leitmotif.

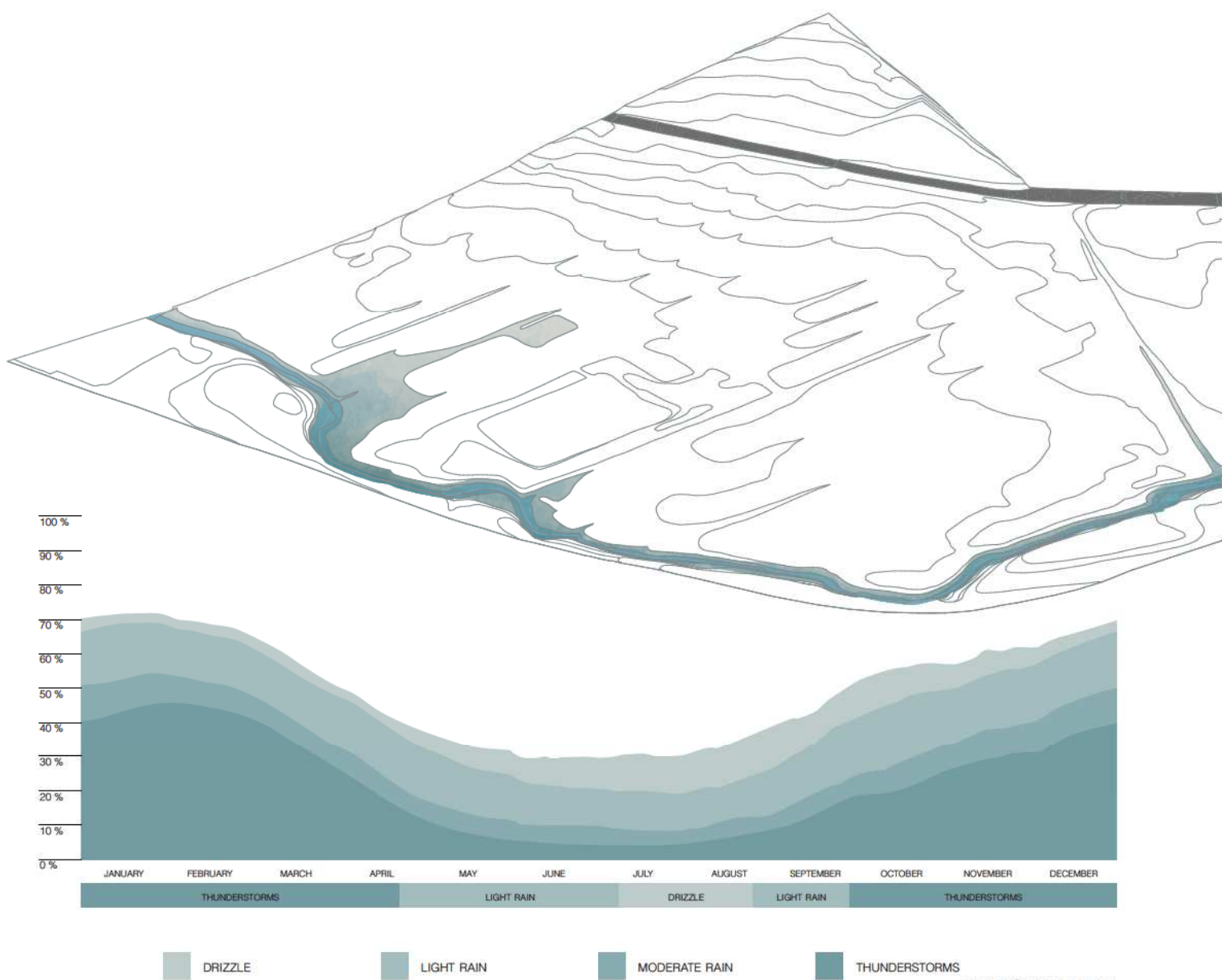
The area that is destined as linear park can in this way be extended by an agricultural park, in which social housing is implemented.



DIFFERENT SCALES | *ESCALAS DIFERENTES*

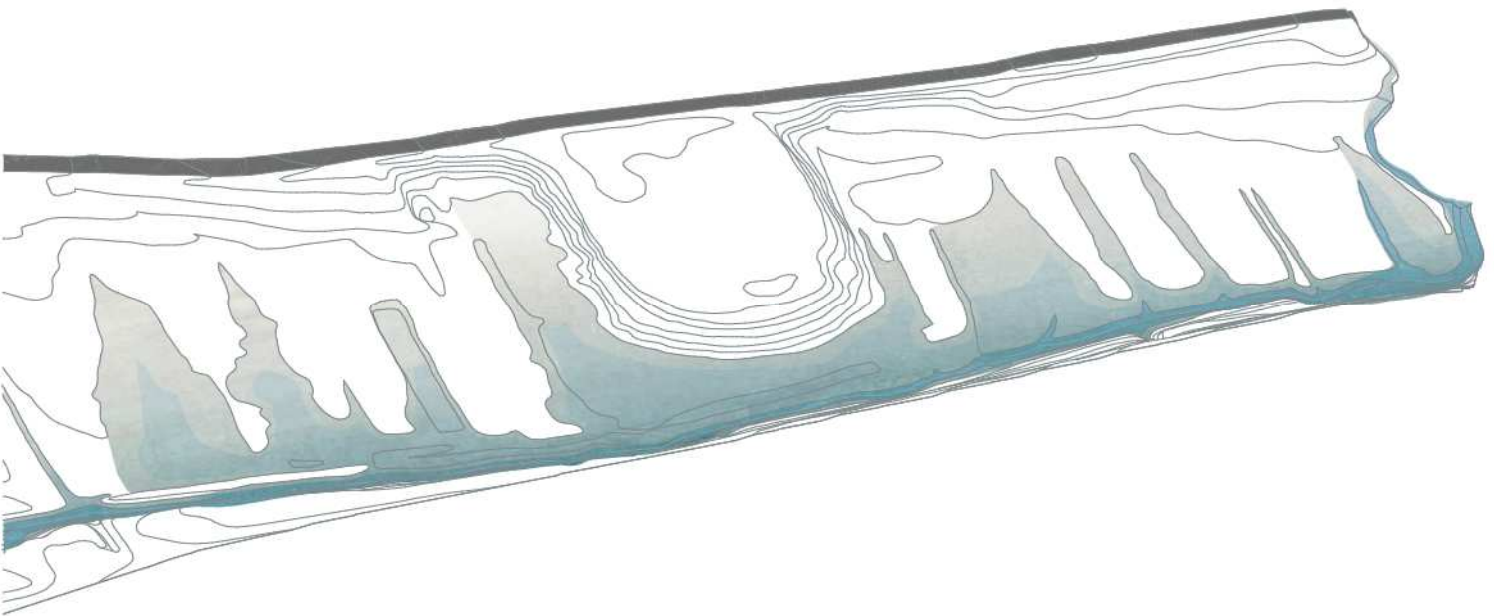


The terrain itself is bordered by Usina's design in the West, the street in the North, river Oratório and the petrochemical industry to the South and a branching of the Oratório to the West. The ZEIS-area is subdivided into two contexts, following from the topography. On the left, the design makes a shift from the dense high-rise buildings of Usina to an open provision of social housing 'above' the agricultural park. To the right, a scale in between is handled to make the transition to the lower buildings surrounding the terrain. This transition is also launched by the present agriculture that shifts in scale from North to South, West to East.



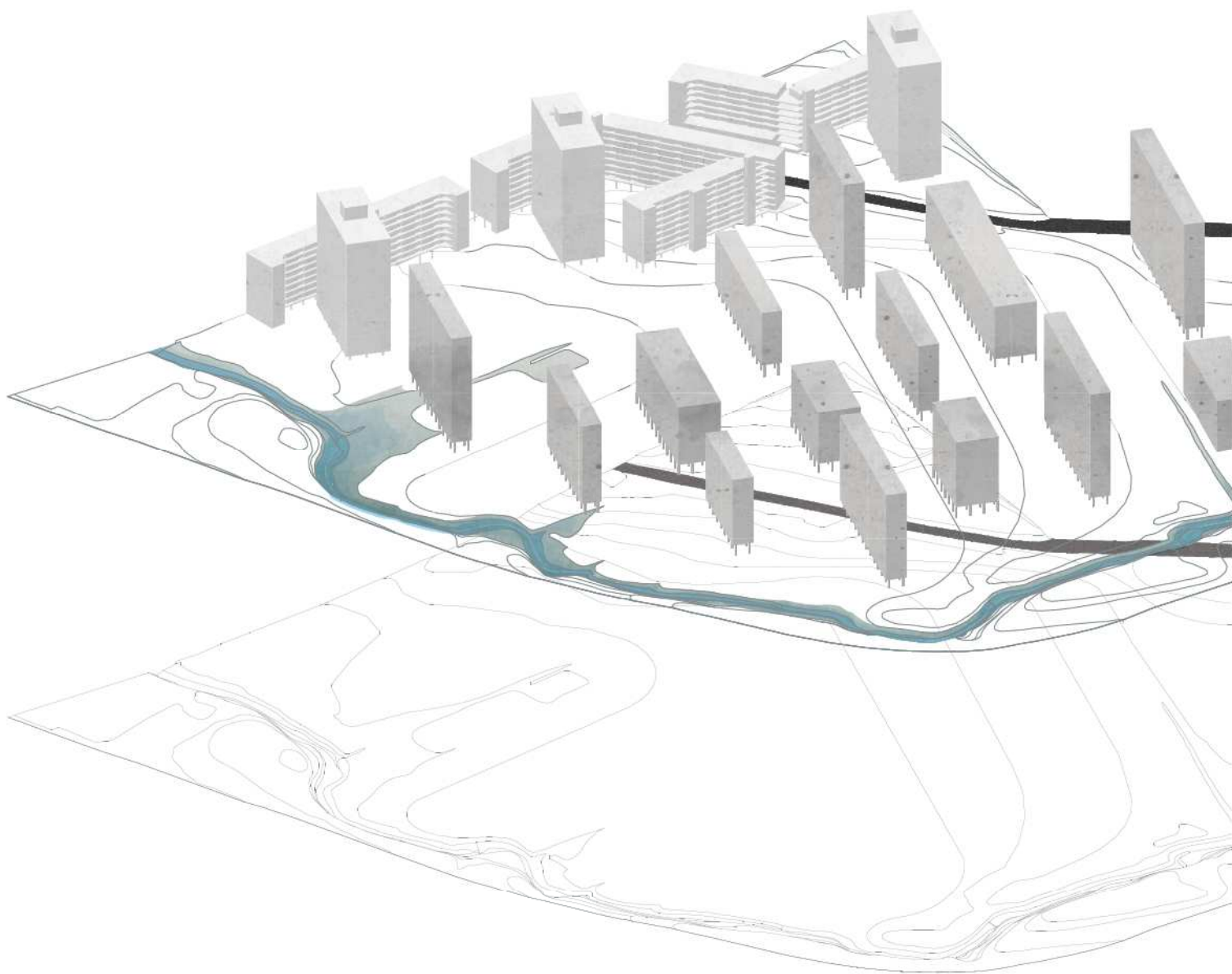
SOURCE: SÃO PAULO CLIMATEPS

LIVING WATER BODY | *CORPO DE ÁGUA VIVO*

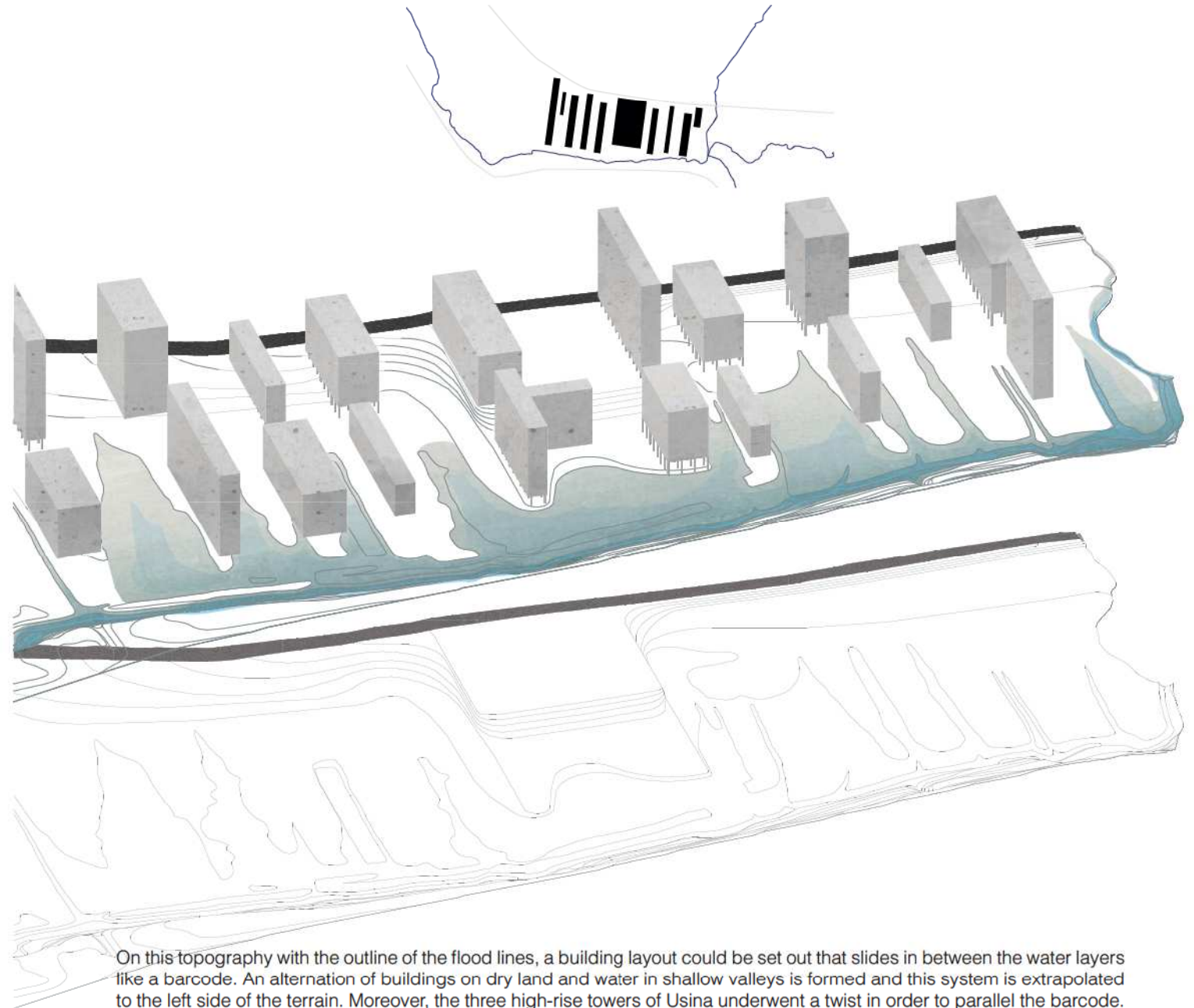


The plot knows a specific topography that has been worn down by the presence of the river. The whole terrain tilts towards the water and the right side of the plot is characterised by a peculiar plateau.

In the design proposal, the river is taken as starting point. A river is never a thin line, it is a living organism, three-dimensional and fluctual. The flood lines come in and out, go back and forward, characterising the main trend of the right part of the area, while the left side is a shallow valley, flattened by the water throughout the years.



BARCODE | CÓDIGO DE BARRAS



On this topography with the outline of the flood lines, a building layout could be set out that slides in between the water layers like a barcode. An alternation of buildings on dry land and water in shallow valleys is formed and this system is extrapolated to the left side of the terrain. Moreover, the three high-rise towers of Usina underwent a twist in order to parallel the barcode.

To strengthen this alternation and let the buildings completely fit in the topography, the landscape is slightly kneaded as well. The plateau on the right side of the plot is located in between a duality. On the west side of the plateau, the topography lines diverge resulting in a smooth slope connecting the terrain to the street, while the steep topography lines on the east side are emphasised.

To enable outdoor activities and covered spaces, some buildings are elevated on pilotis. As such, the buildings bordering the plateau provide opportunities for all kind of activities. In the valley in the West of the ZEIS-zone, the buildings are also lifted on pilotis in order to let the water flow underneath the buildings.

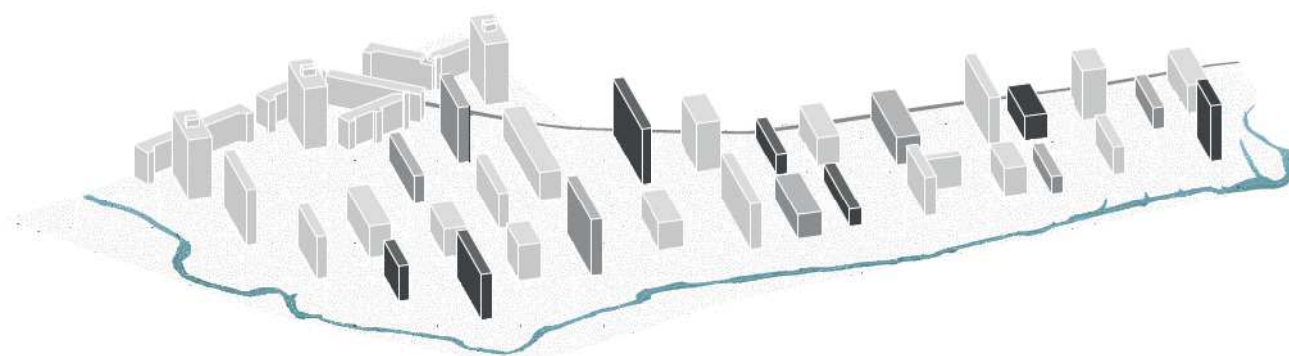




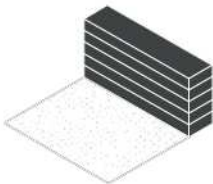
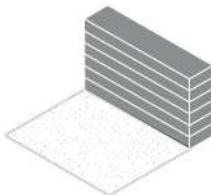
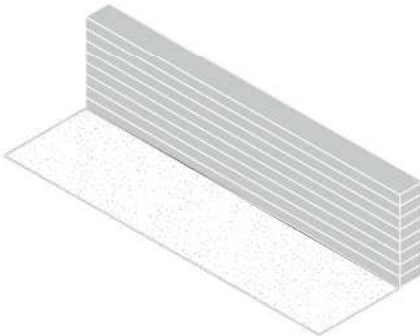
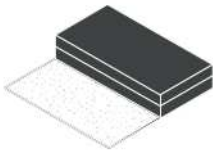
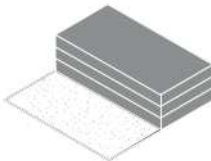
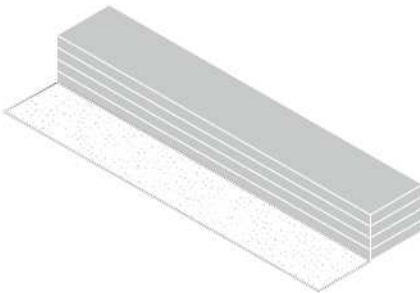
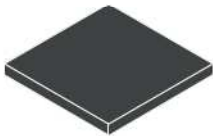
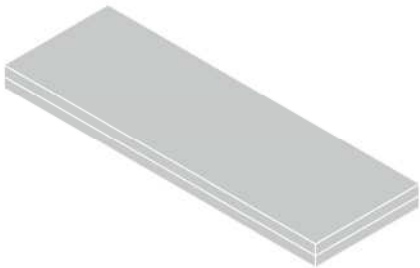
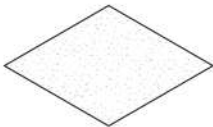
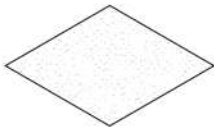
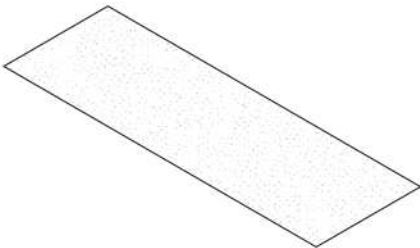
DENSITY | DENSIDADE

The amount of families, in order to cope with the price of the terrain, causes a vast increment in the average occupation density in the neighbourhood of Parque São Rafael. Usina provides a density of 356 units per hectare, almost double in comparison with the surrounding plots.

The 'rules' of ZEIS and its density are spatially translated. ZEIS obligates that minimum 60% of the terrain is destined for range 1 and that maximum 20% of the terrain for range 3. (See: Chapter II. Terrain (p. 233))



DENSITY | DENSIDADE

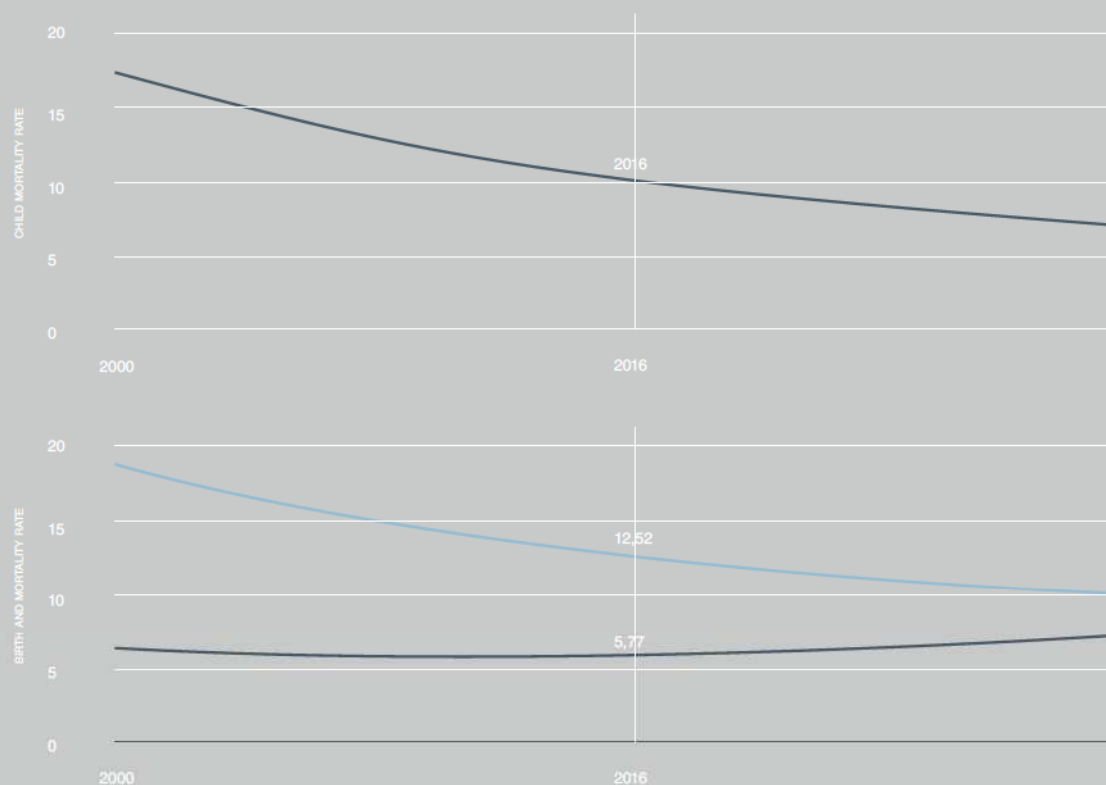


		Average São Paulo				New project Pq. São Rafael
	0-19 years	14,34%	boys	13,74%	girls	2180
	20-39 years	16,37%	boys	16,11%	girls	788
	40-70 years	16,2%	boys	17,49%	girls	817
	70+ years	2,32%	boys	3,42%	girls	139

POPULATION IN SÃO PAULO (IBGE - WEBSITE, 2016)



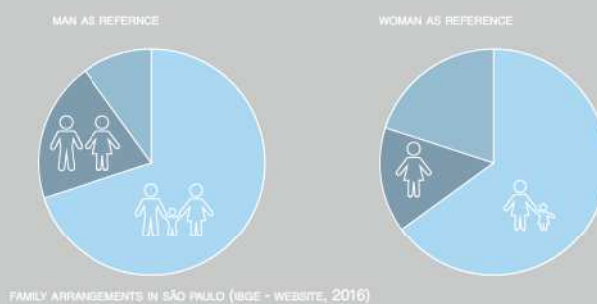
POPULATION IN SÃO PAULO (IBGE - WEBSITE, 2016)

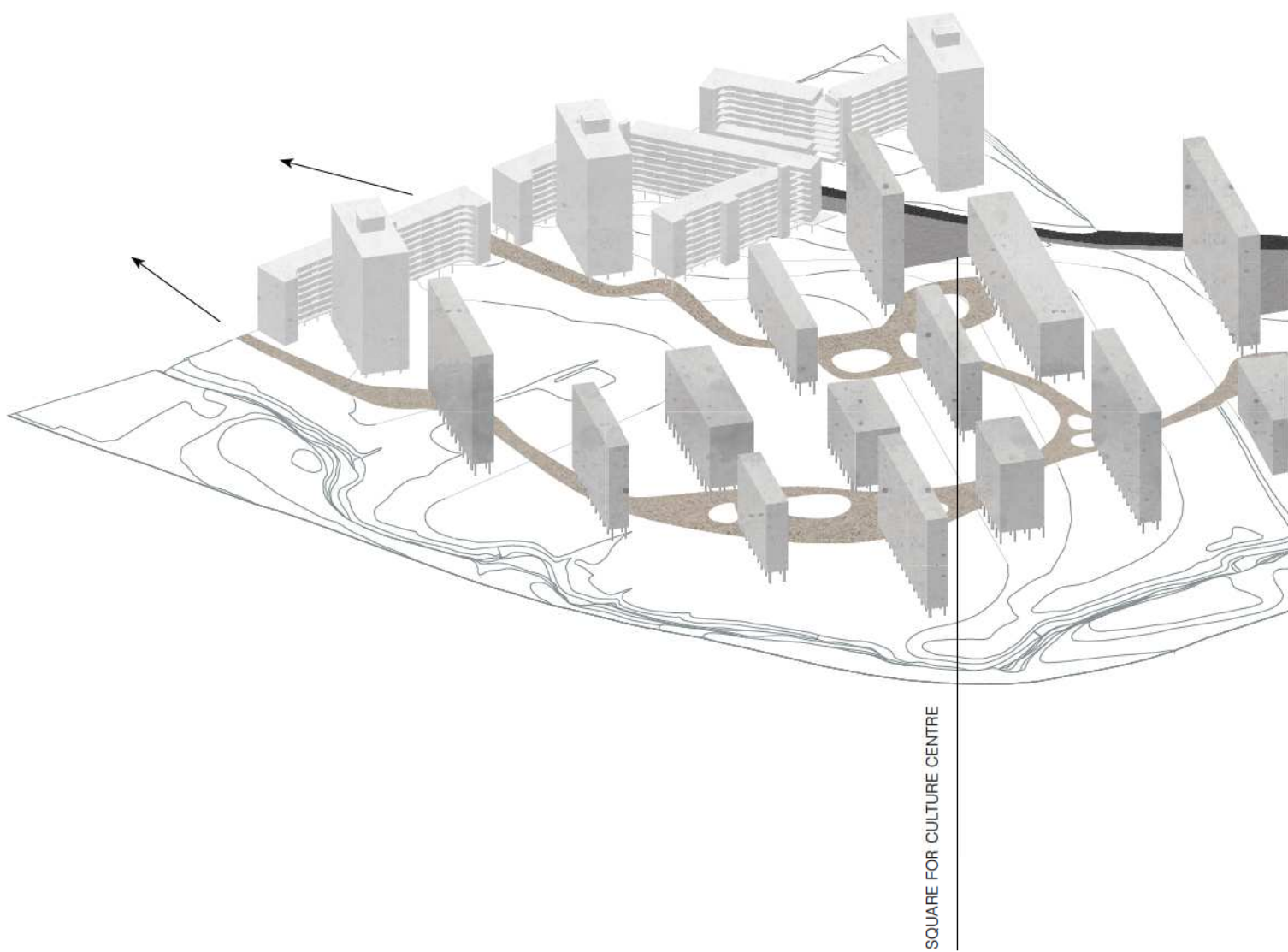


POPULATION IN SÃO PAULO (IBGE - WEBSITE, 2016)

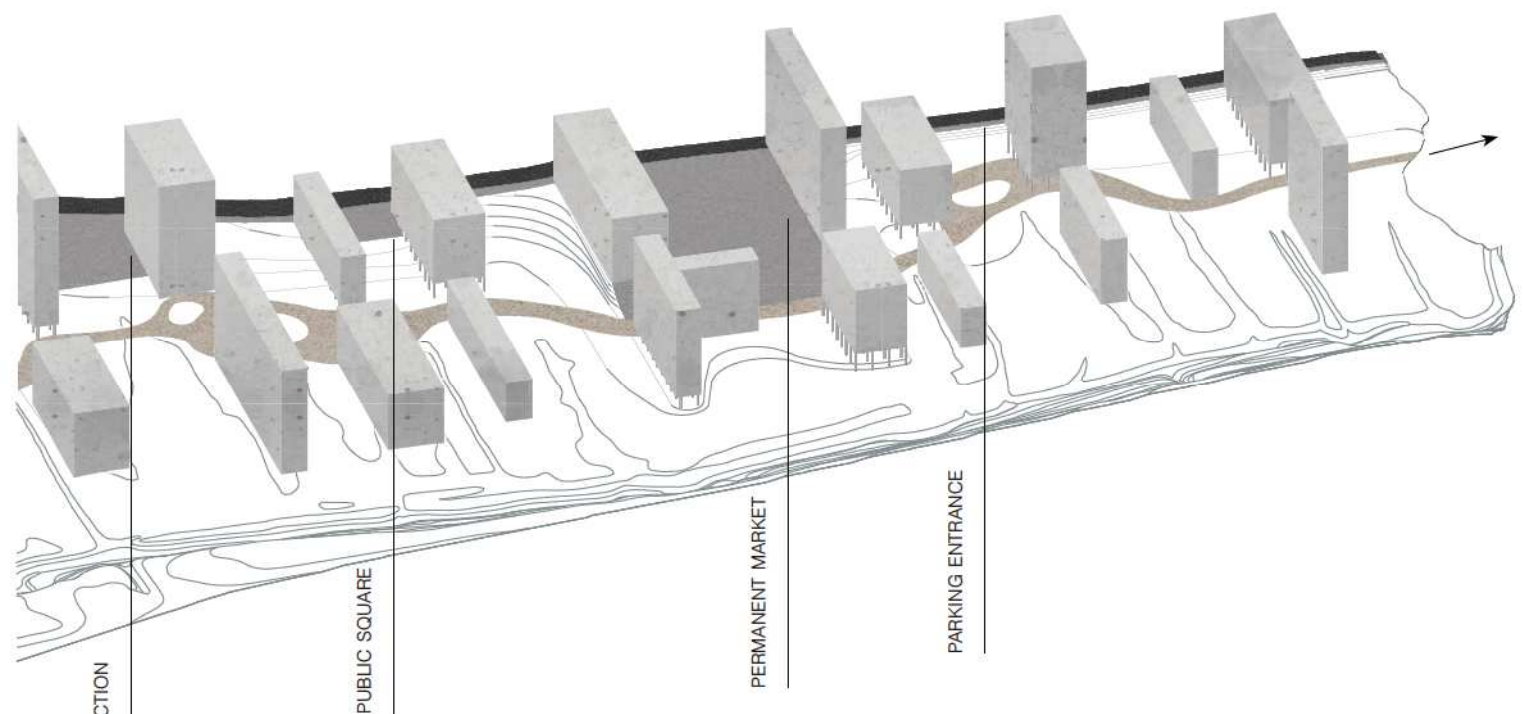
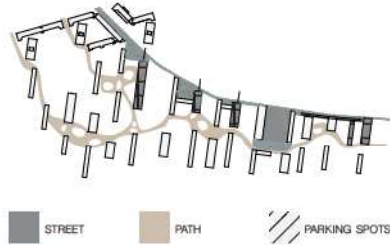
Average size of families: 3,2 people

Considering family arrangement in families where the man is the reference person, the most frequent types of family are "couple with children" (70.9%) and "couple without children" (18.2%). In families where the woman acts as reference an arrangement with children, but without spouse (65.1%) dominates, followed by the sole type (17.1%). Regardless of the sex of the reference person, families with children have the lowest average household income per capita. (Nakano - website, 2012)





A PATH LEADS THE WAY | *UM CAMINHO LEVA A MANEIRA*

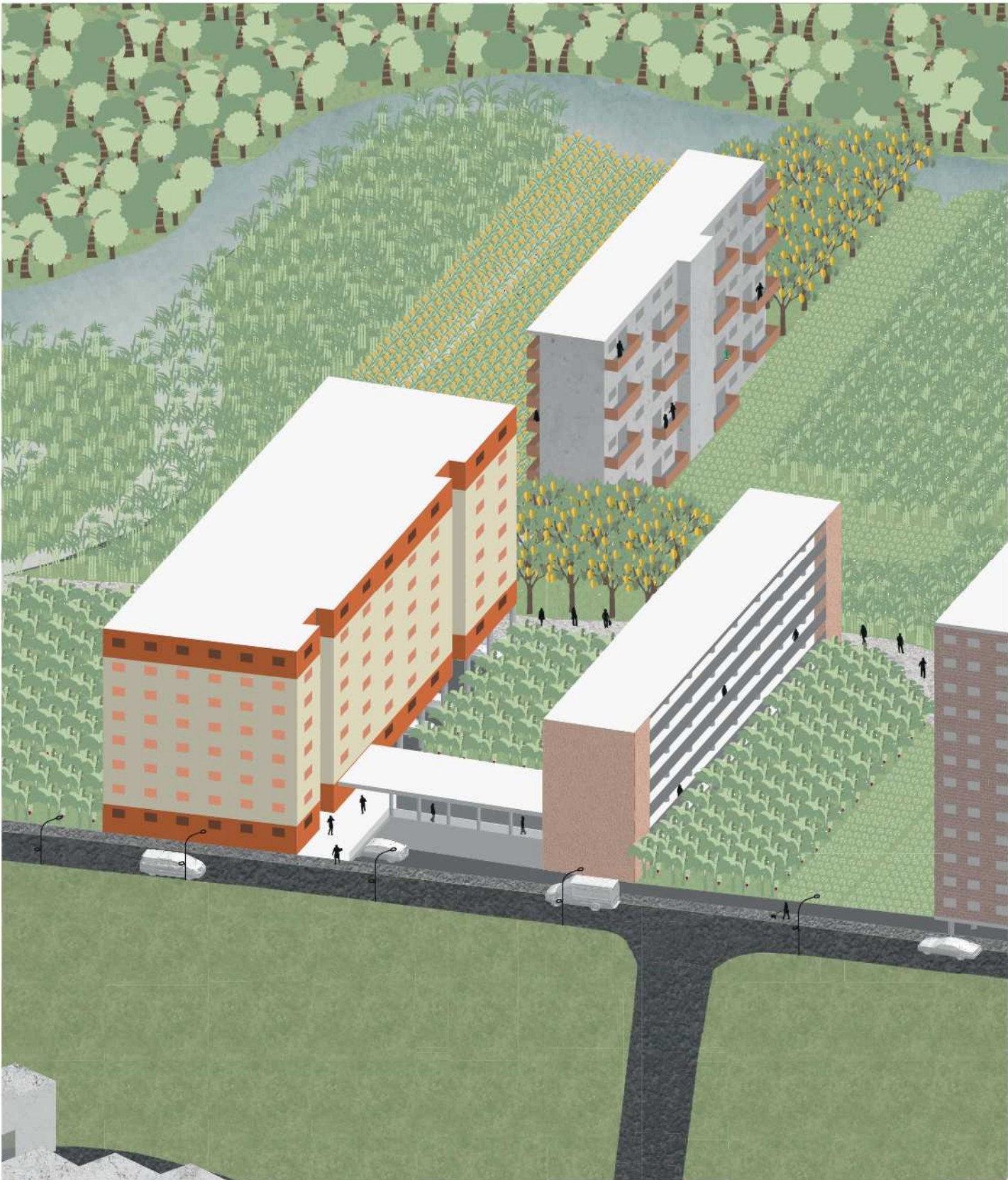


A path is provided throughout the terrain to connect the new building blocks, the project of Usina, and the blind alleys that end at the left side of the terrain. The organic track breaks through the tight grid of the barcode of buildings and groups dwellings as if they are small communities.

The larger scale on the west side causes the path to split into two side tracks that attach to the former blind alleys. The reducing scale of the terrain eastwards lets the path converge again, passing the platform and 'ending' at the side track of the river, where it can cross and connect to a next plot. The organic path is provided as a naturally materialised surface that contrasts the asphalt of the street.

To provide a margin for the street as well and let it make a contribution on its own, the street bulges out, serving as an ideal place for commercial and public functions. The main plateau forms the centrality for the whole community, provisioned with a permanent market.

The plot, in general, is car-free, but some buildings that immediately connect to the street are equipped with parking spaces on ground level and they are lifted on pilotis to allow the entering and leaving of cars. On the east side of the plot, another parking system was needed due the steep slope. A ramp, parallel to the street is provided to enable parking under the blocks.



THE PARKING UNDERNEATH THE BUILDINGS CAN BE ENTERED FROM THE STREET





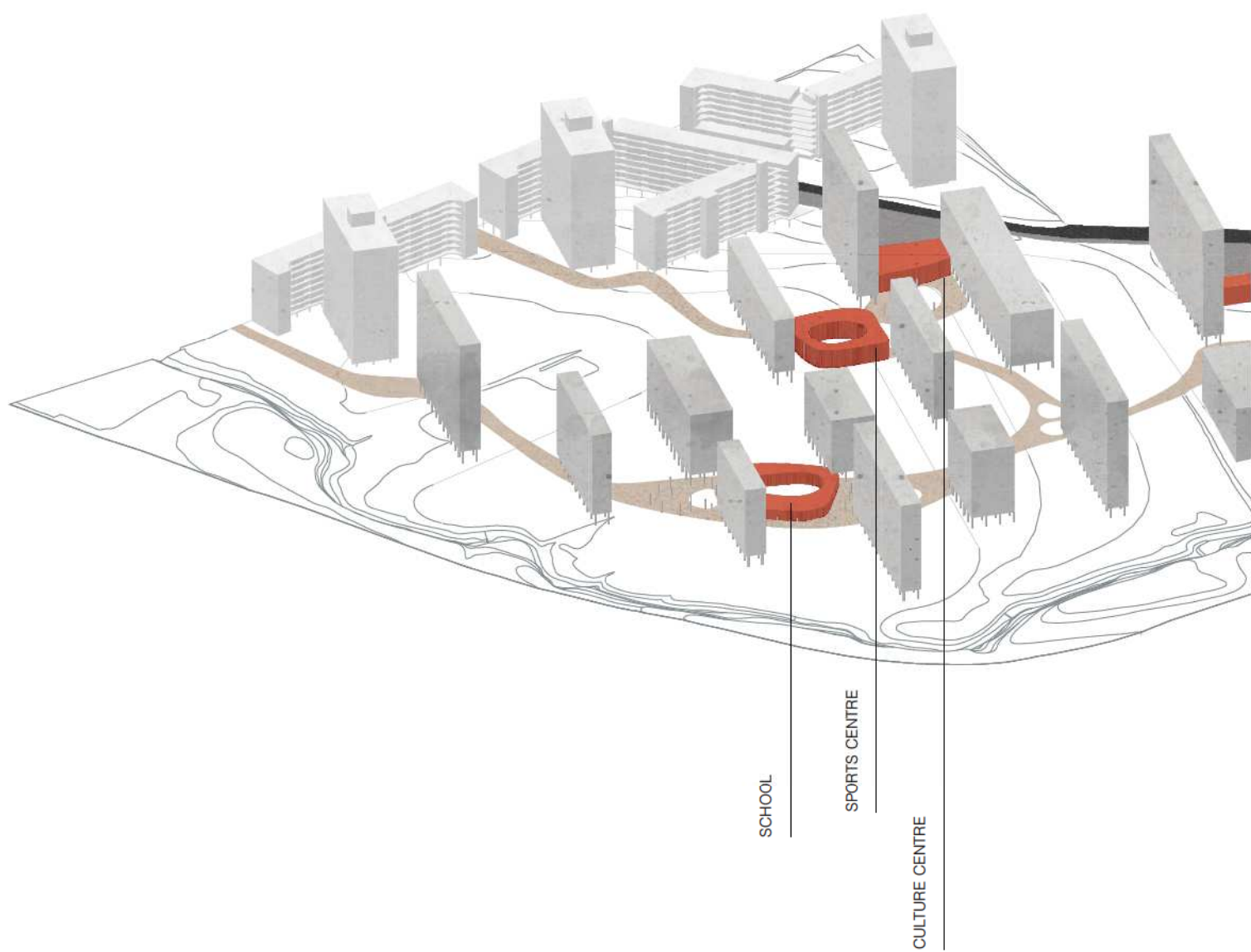
BURLE MARX

GREEN ARTWORK | *PINTURA VERDE*

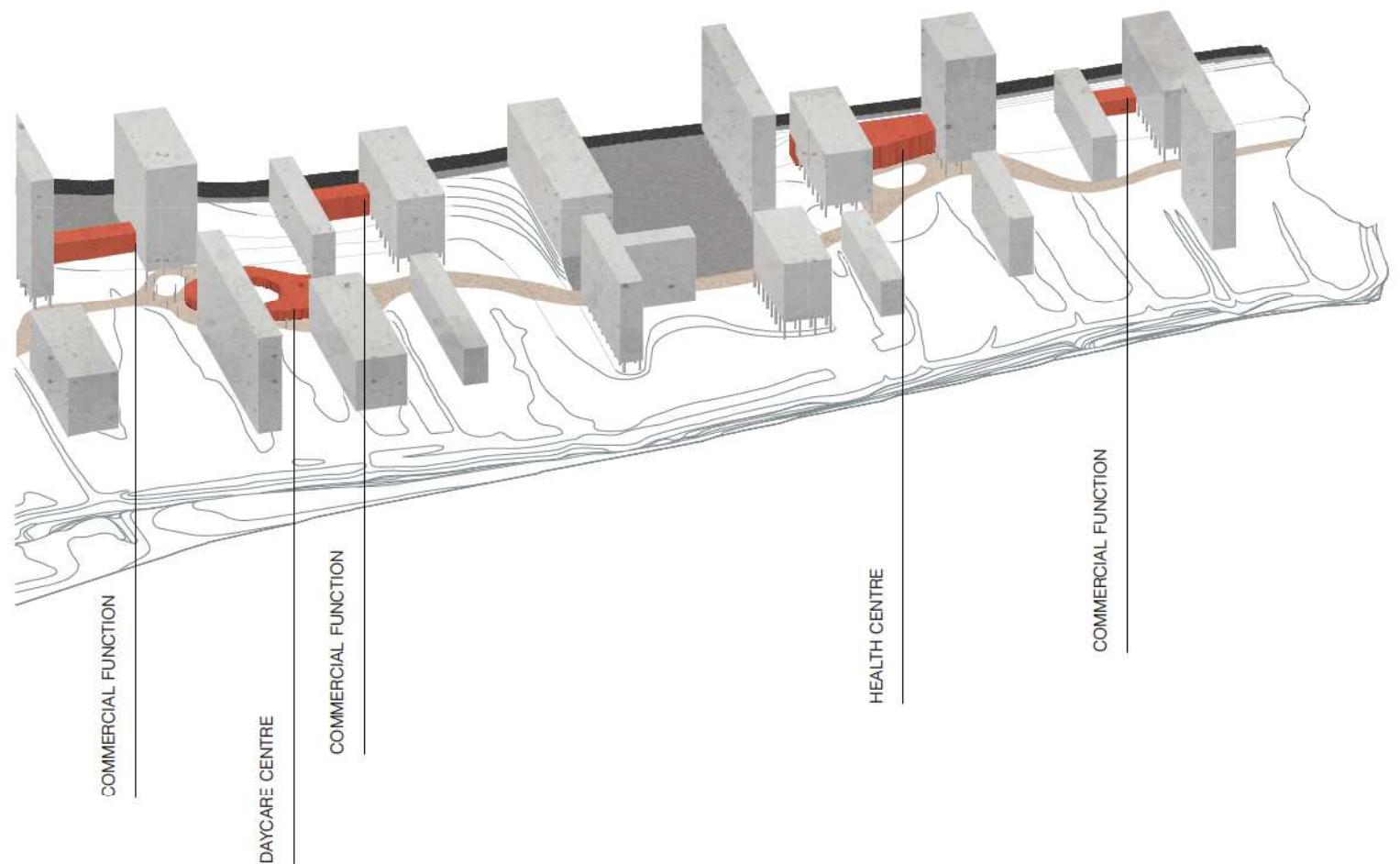
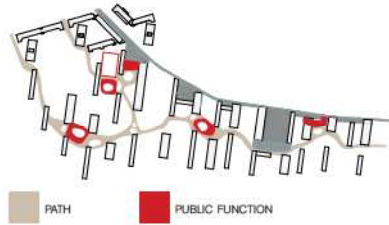


BURLE MARK

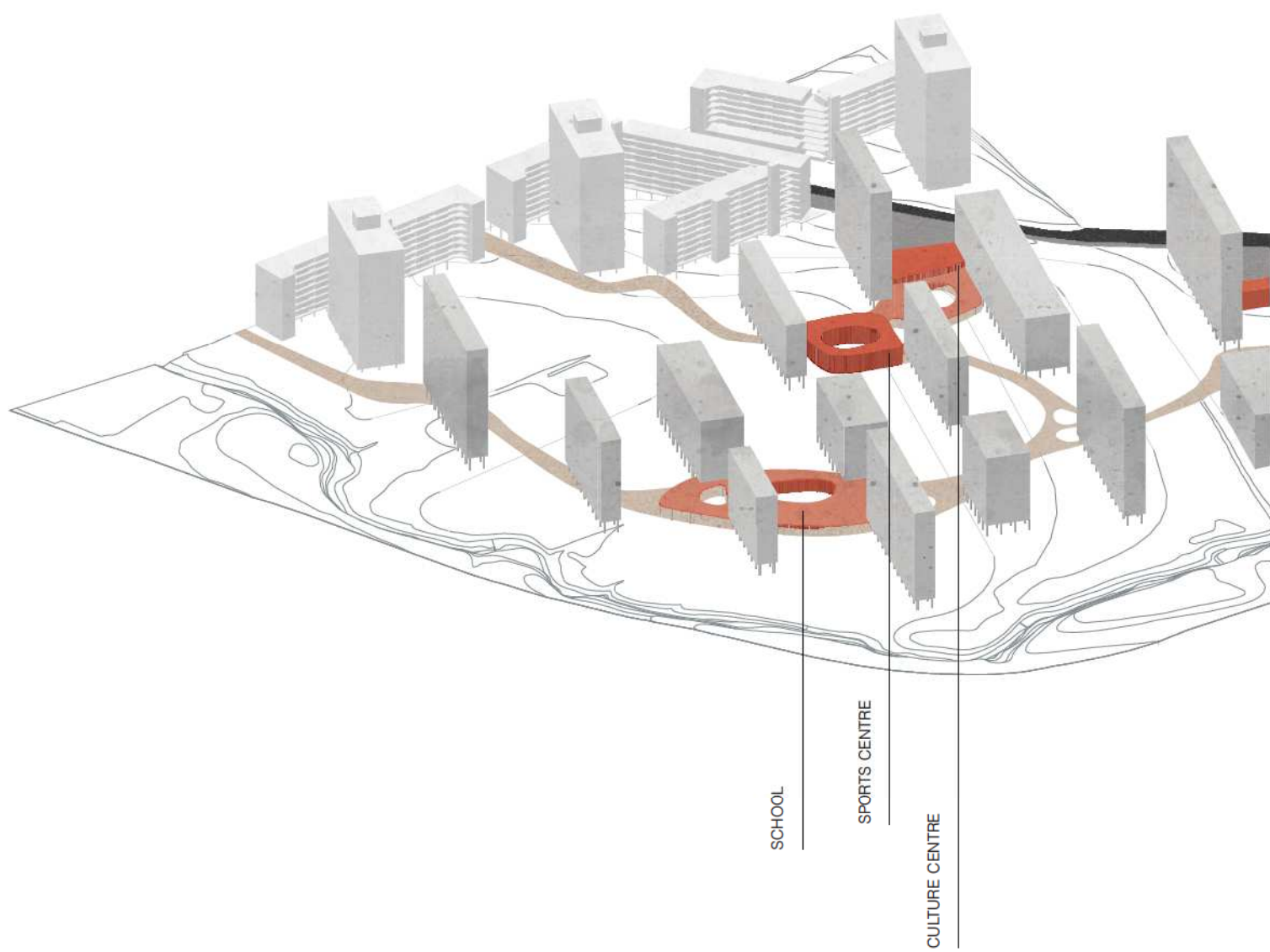
ORGANIC PATH, MEANDERING THROUGH GREEN



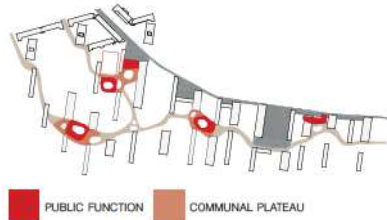
PUBLIC PLEASURE | PRAZER PÚBLICA



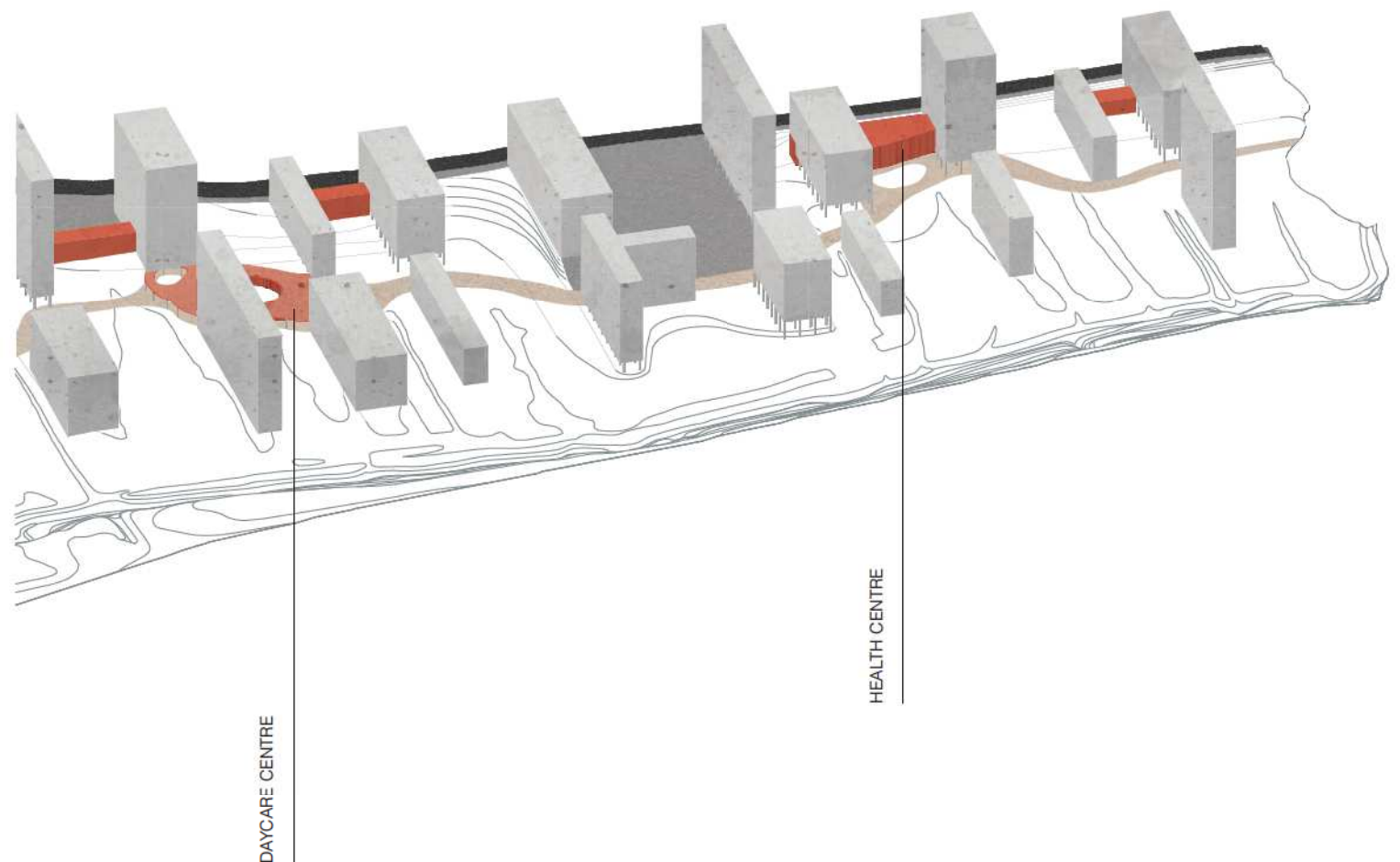
The path, meandering through the terrain, organises the circulation and connects the several public functions that are located along the road. Each function represents a centrality for the neighbourhood, creating an internal square. The bulges of the street are also provided by public facilities. As these facilities are directly connected to the street, commercial functions are implemented to serve the entire neighbourhood.



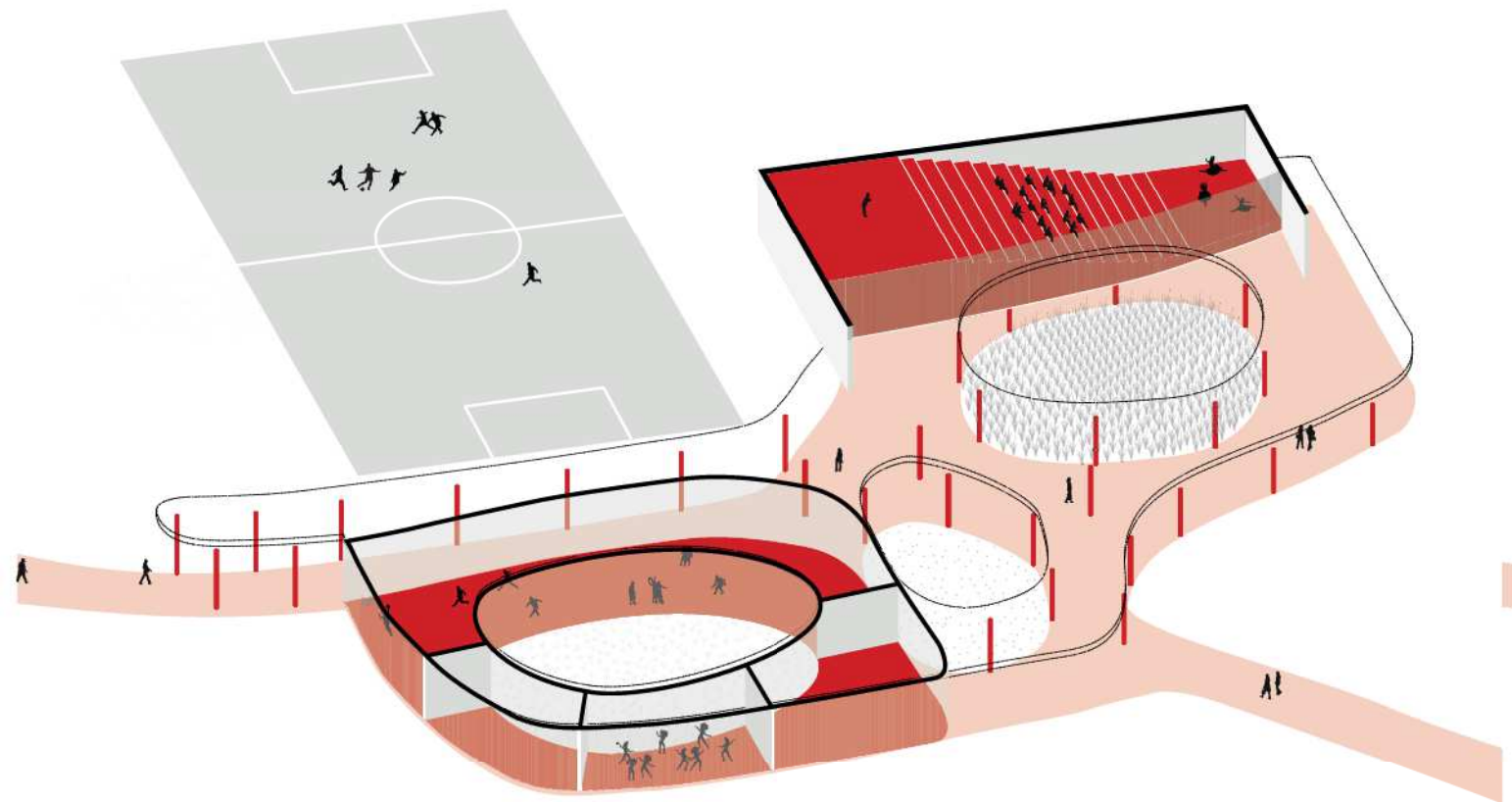
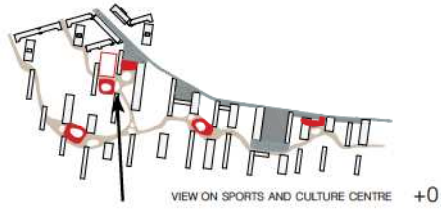
COMMUNAL PLATEAUS | *PANALTOS PÚBLICOS*



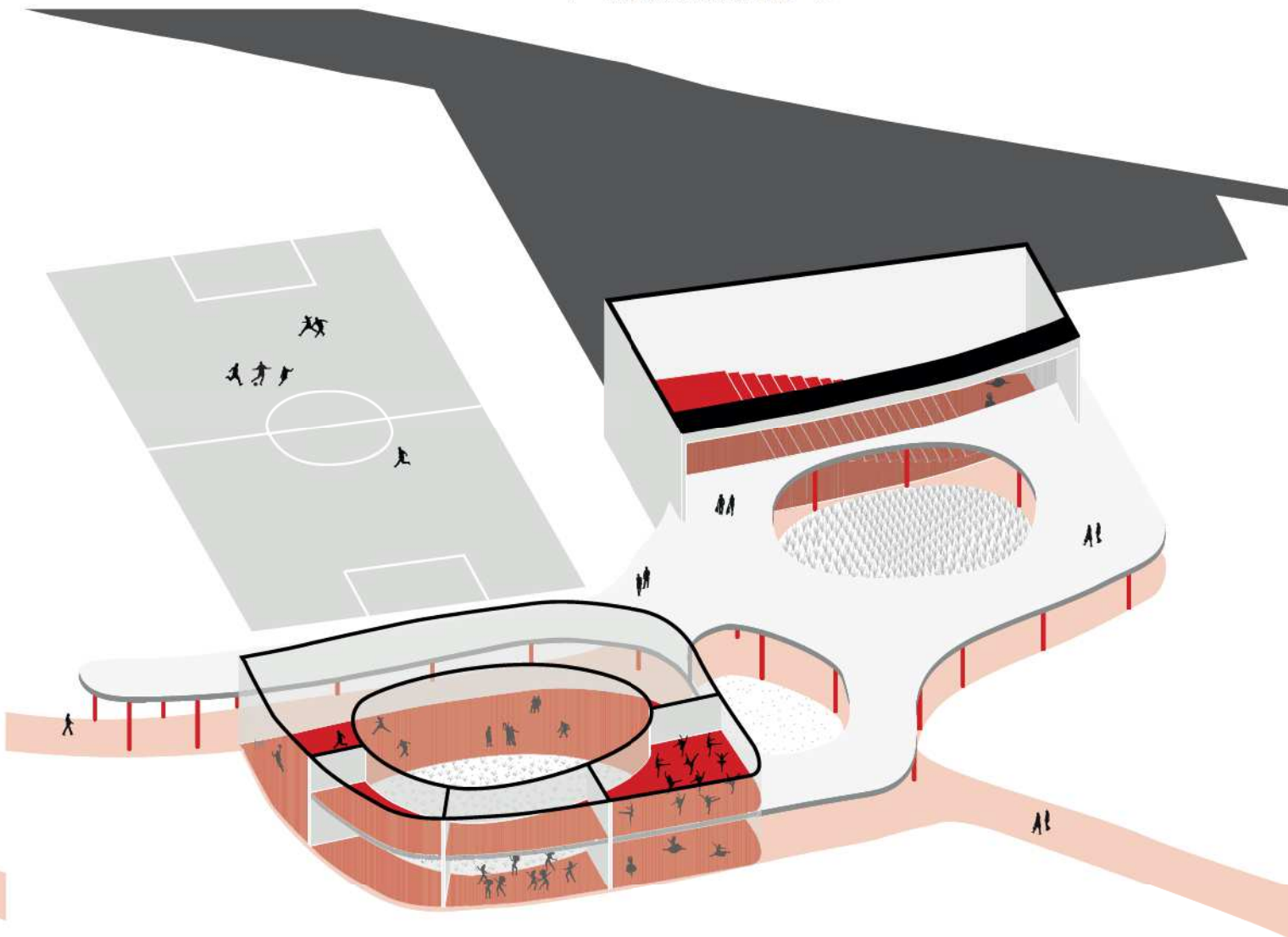
■ PUBLIC FUNCTION ■ COMMUNAL PLATEAU



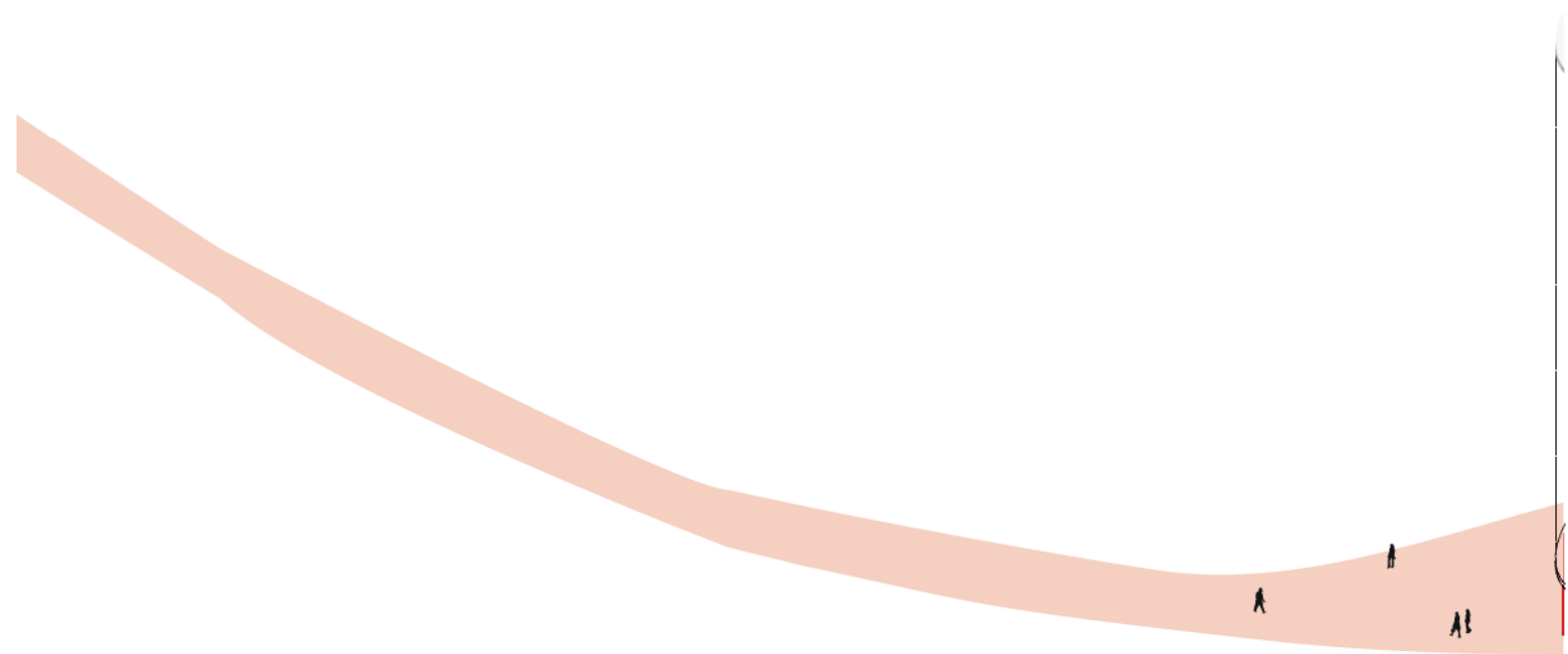
On top of the public functions on the central path, three lifted plateaus are inserted, offering the public functions a covered outside space. Not only are these lifted plateaus the roofs of these public facilities, they also function as centralities for the adjacent buildings. While the meandering path and its inherently linked public functions are accessible for everyone, the lifted plateaus above the school and the daycare centre are meant for the community. The plateau near the sports and culture centre serves as the intermediate between these two facilities.



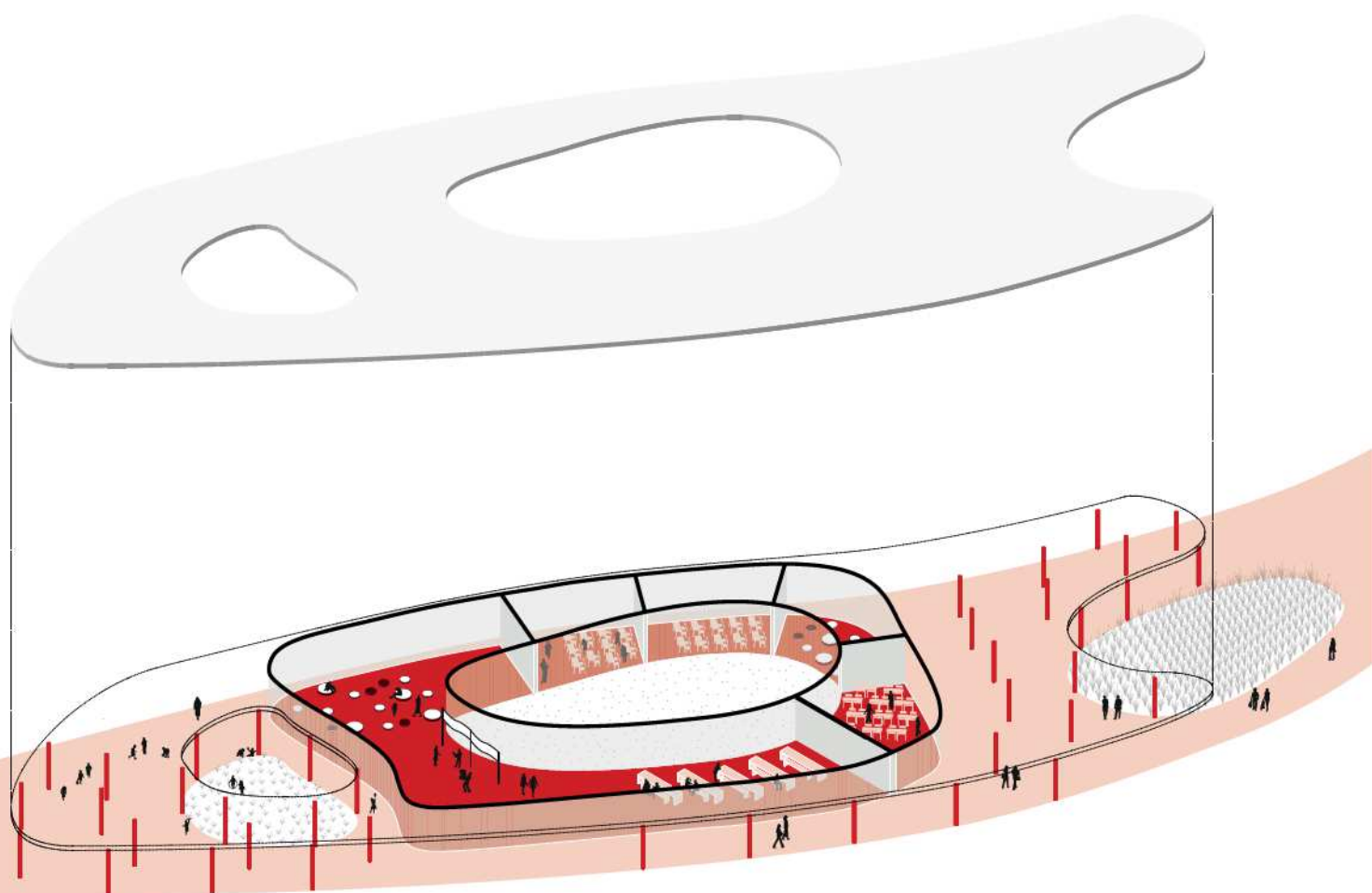
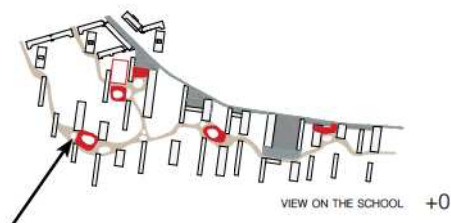
SPORTS AND CULTURE CENTRE | *CENTRO DESPORTIVO E CULTURAL*



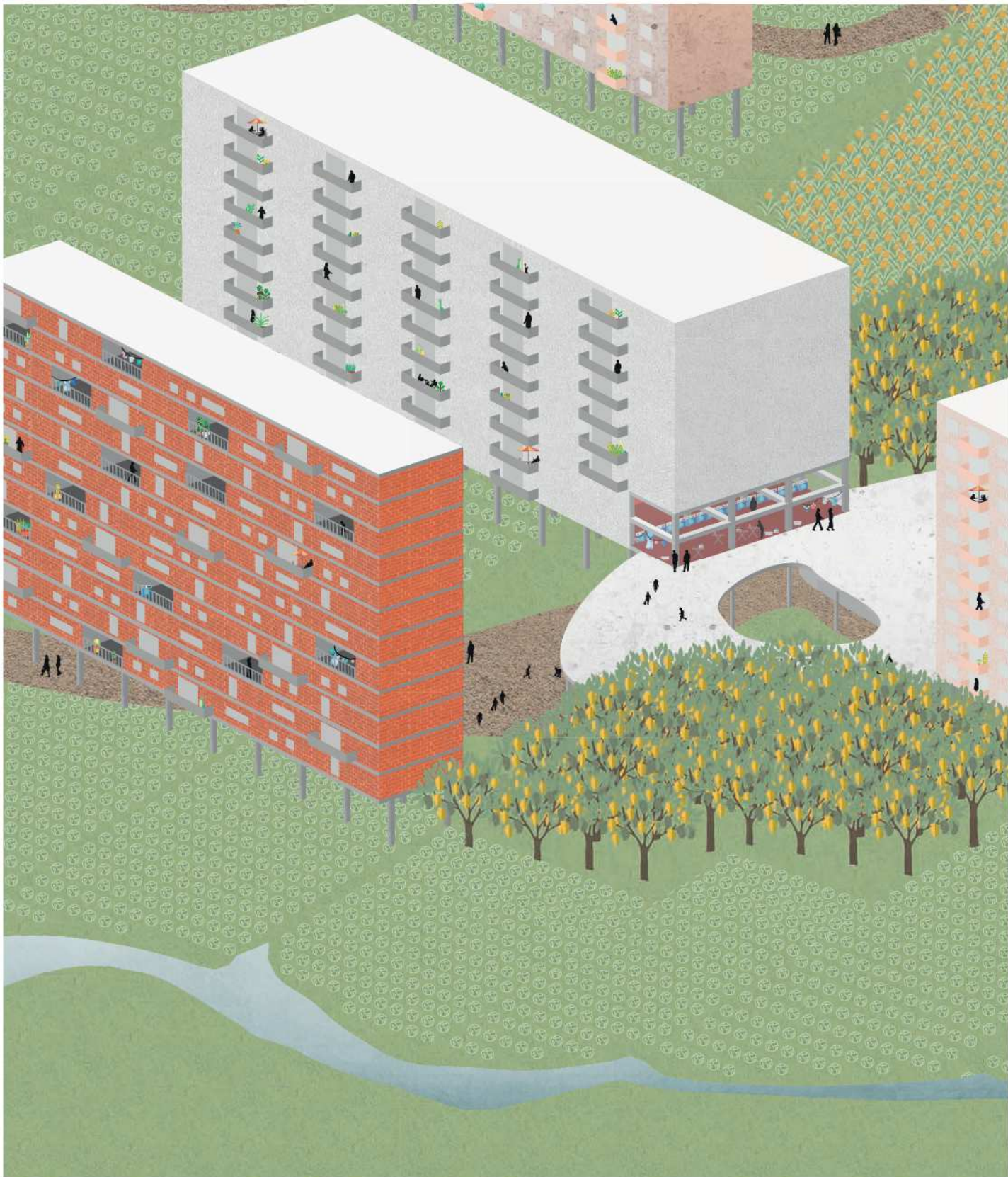
The culture centre is directly connected to one of the bulges of the street. It consists of an auditorium, available for various events. It also forms the passage to the public plateau, linking the sports centre. This public centre has a double high sports hall and several smaller rooms for more specific sports, such as dancing and yoga. Next to the sports centre and the path, a football pitch is located. The elevated plateau serves as an ideal space for spectators.



DIFFERENT LAYERS OF COMMUNITY | CAMADAS DIFERENTES DA COMUNIDADE



The public school can only be accessed from the path. It has open common spaces and individual classrooms. All of them are connected by a central patio that offers daylight and a private playground. On top of the school, a plateau is installed for the 'local neighbourhood' that borders this lifted floor. The buildings adjacent to the plateau have facilities for the neighbourhood such as a barbeque space, a communal laundry area and a *sala de festas* on their first floor.



ON TOP OF THE SCHOOL A PATEAU SERVES AS COMMUNAL SQUARE FOR THE SURROUNDING BLOCKS. IT CAN BE USED AS EXTENSION TO THE COMMUNAL FUNCTIONS ON THE TAIL OF THE BUILDINGS TO WHICH IT IS IMMEDIATELY LINKED TO.





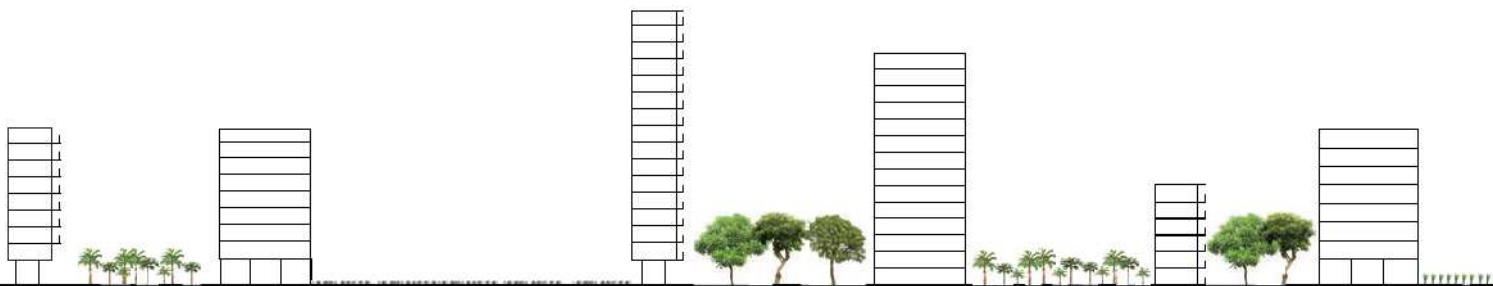
NEMEYER - IBIRAPUERA, THE GRANDE MARQUISE (ARCHDAILY - SITE)

PUBLIC SLAB | *CHÃO PÚBLICO*



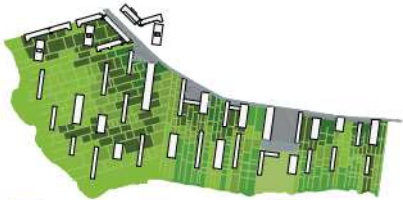
NEMEYER - BIRAPUEBA, THE GRANDE MARQUISE (ARCHDAILY - SITE)

SLAB THAT HIVES DIFFERENT ACTIVITIES

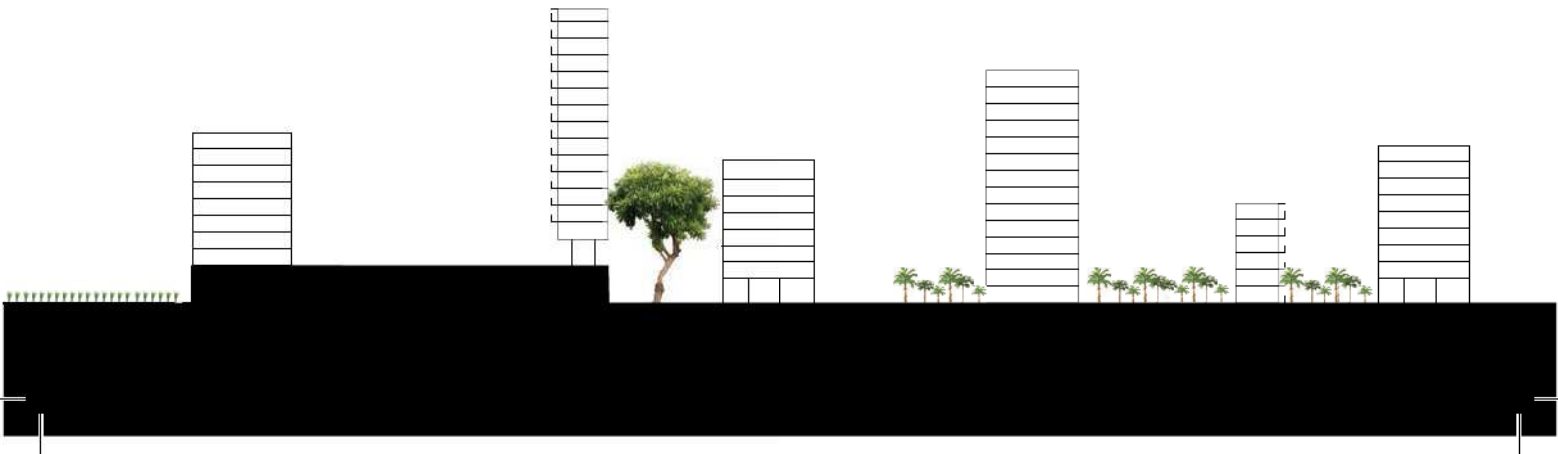
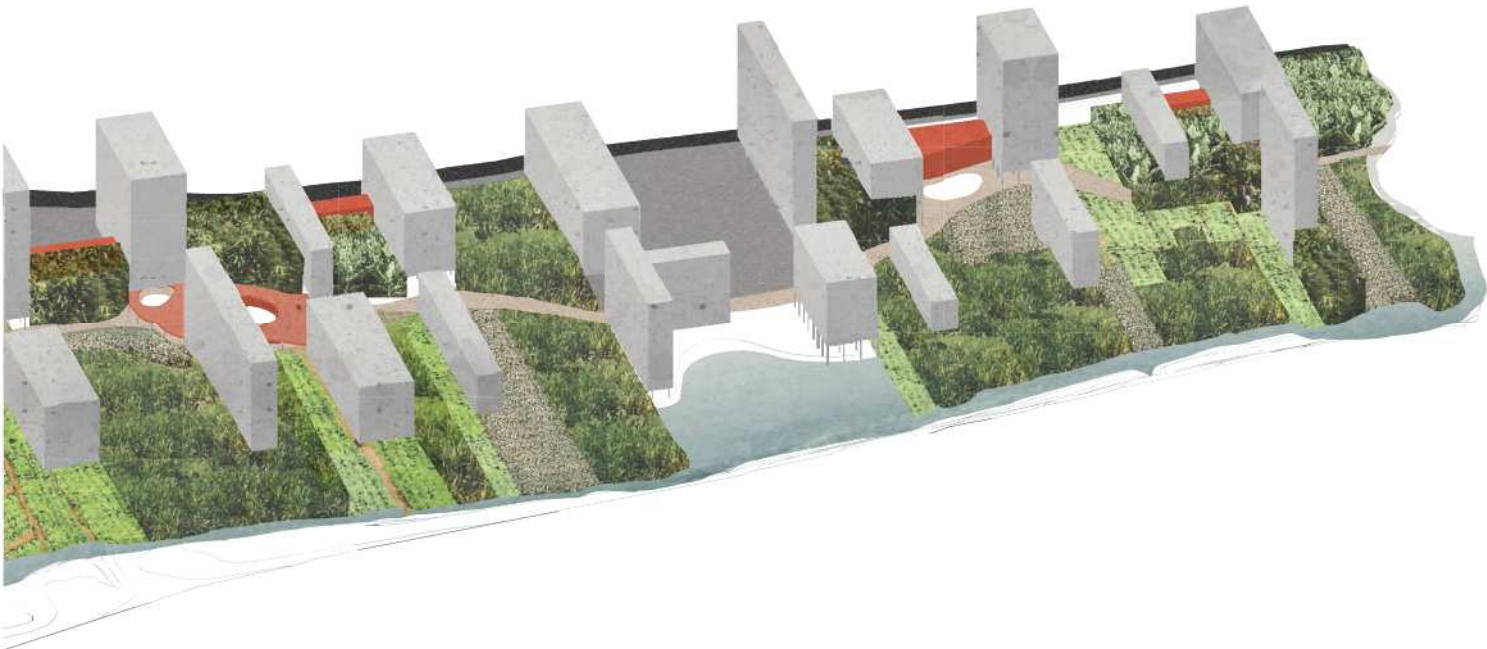


SECTION 1:1000
VARIATION OF 'GREY' AND GREEN

SHIELDING AND SHOWING | *PROTEGER E MOSTRAR*



- | | | |
|------------|---------|-----------|
| GRASS | LETTUCE | PINEAPPLE |
| SUGAR CANE | BANANA | MANGO |





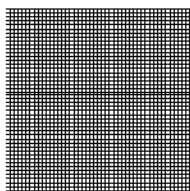
LETTUCE

NEEDS A LOT OF WATER AND
SUN

TAKES 2 MONTHS TO GROW

CAN BE HARVESTED ALL YEAR
ROUND

6 PIECES/YEAR PER PLANT



RASTER OF 20CM

250 000 LETTUCES/HA

5 250 000 LETTUCES/YEAR



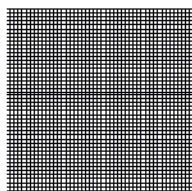
PINEAPPLE

NEEDS A LOT OF SUN

TAKES 6 MONTHS TO GROW

CAN BE HARVESTED TWICE
A YEAR

1 PIECE/YEAR PER PLANT



RASTER OF 20CM

40 000 PINEAPPLES/HA

40 000 PINEAPPLES/YEAR



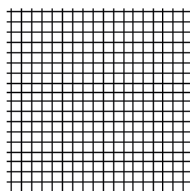
SUGAR CANE

NEEDS A LOT OF WATER

TAKES 6 MONTHS TO GROW

CAN BE HARVESTED IN AUGUST

200 TONS/YEAR/HA



RASTER OF 50CM

250 000 SUGAR CANES/HA

380 TONS SUGAR CANES/YEAR
(=38 TONS SUGAR)



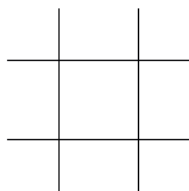
BANANA TREE

NEEDS A LOT OF SUN AND
DRAINED SOIL

TAKES 9 MONTHS TO GROW

CAN BE HARVESTED ONCE
A YEAR

200 PIECES/YEAR PER TREE



RASTER OF 4M

625 BANANA TREES/HA

125 000 BANANAS/YEAR

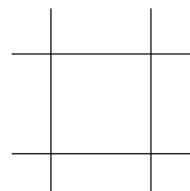


MANGO TREE

TAKES 3 MONTHS TO GROW

CAN BE HARVESTED TWICE
A YEAR

200 PIECES/YEAR PER TREE



RASTER OF 5M

400 MANGO TREES/HA

220 000 MANGOS/YEAR

In between the barcode of buildings, agriculture plots are laid out to form the self-production activities and act as a coherent agriculture park. The direction of the plots refers to the original location of the agriculture fields and is the optimal way for water to pass to the river, enabling direct irrigation. Vegetation typologies can differ in height, density, colour, climatic requirements, grow and harvest periods and expected income. Taking these conditions into account, five green varieties and their locations are defined. They create a colourful mixture of vegetation and the different heights and widths offer a diversity in private and public zones.

The agriculture plots are exploited by a selected group of farmers. The yield is collected and processed in order to sell these products on the permanent market. A part of the harvest is kept aside for a communal restaurant, using it to prepare meals for the community. The communal restaurant is located next to the permanent market that will become the hub of the new community.

Since the trend in social movements is to provide a self-productive system within a parallel society, the focus on self-production is maintained and encouraged by the design proposal. The self-productive agriculture is not only a way in order to (partly) self-sustain, it's also a way to stimulate and maintain the community. People work together to make use of the products and the central permanent market is the place to buy fruits and vegetables, to have a meal in the communal restaurant and to meet people.



THE PERMANENT MARKET IS ACCESSIBLE FOR THE WHOLE NEIGHBOURHOOD AND ACTS AS SMALL CENTRALITY. ON THE LOWER SQUARE BY THE RIVERSIDE, A WATERARENA IS PROVIDED TO BUFFER HEAVY RAINFALL AND ENABLE IRRIGATION.





ARTIGAS - LOUVEIRA (V.O.R. - SITE)

URBAN JUNGLE | *SELVA URBANA*



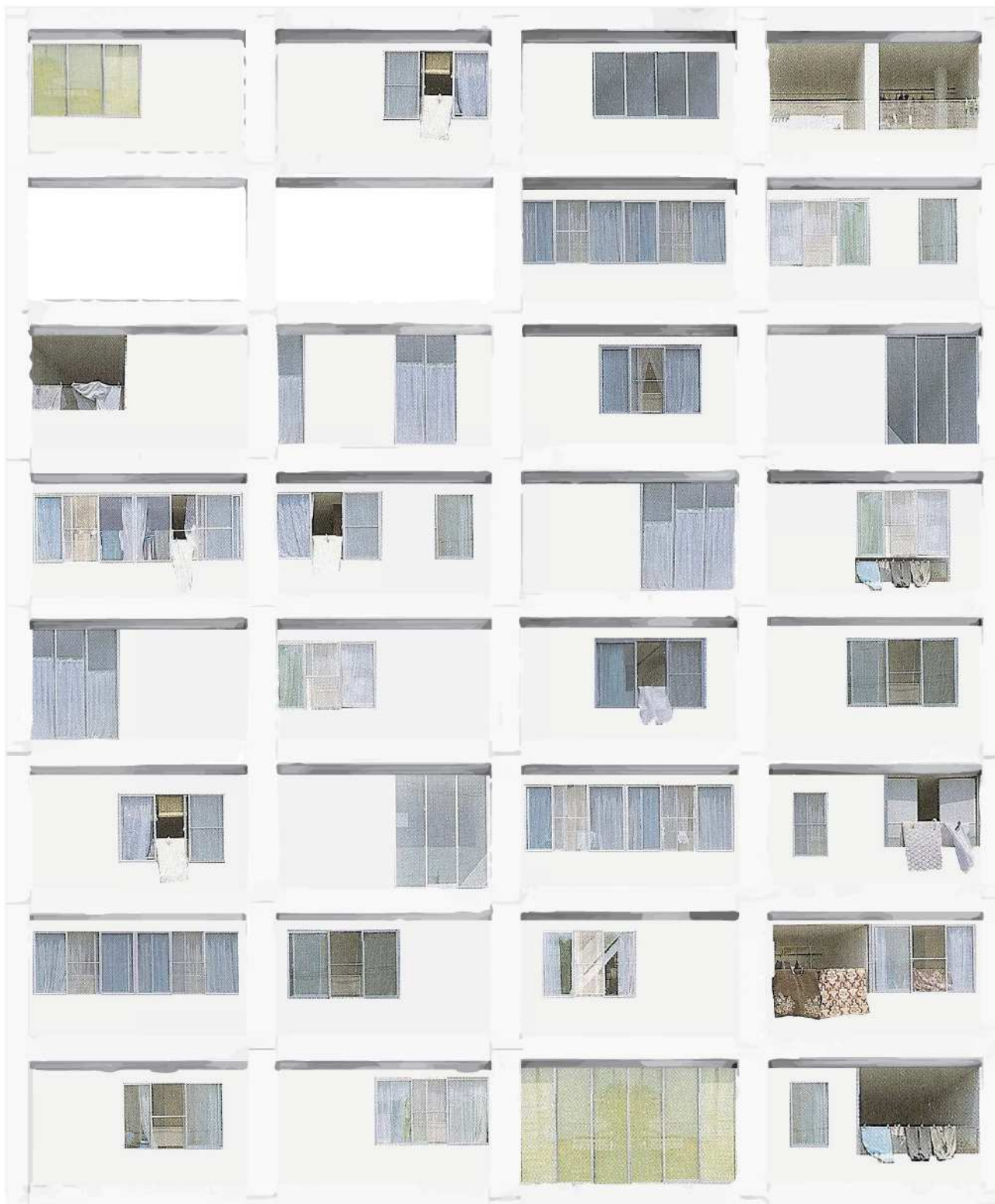
ARTIGAS - LOUVEIRA (KATINSKY - SITE)

JUNGLE GARDEN - BLIND FACADES ON THE SIDE



COMPLETE OVERVIEW OF ALL THE LAYERS IN THEIR CONTEXT

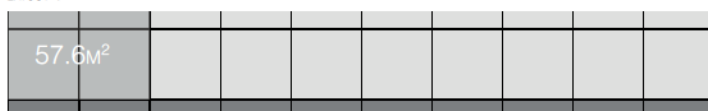




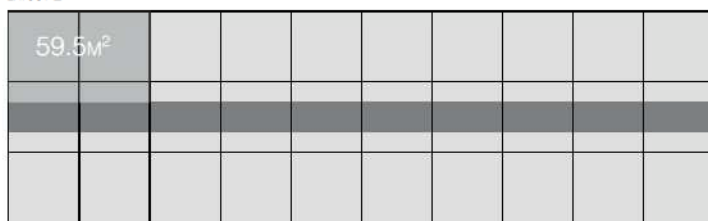
THE INDIVIDUAL DIVERSITY IS STRENGTHENED IN MUTIRÃO PROJECTS BY LEAVING FREEDOM IN THE ASSEMBLY OF EACH MUTIRANTE'S APARTMENT

ALTERNATIVE FUTURE FOR MUTIRÃO | FUTURO ALTERNATIVO PARA MUTIRÃO

LAYOUT 1



LAYOUT 2

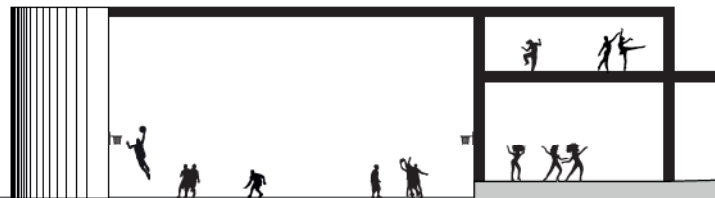


TOPVIEW OF SKELETON RASTER

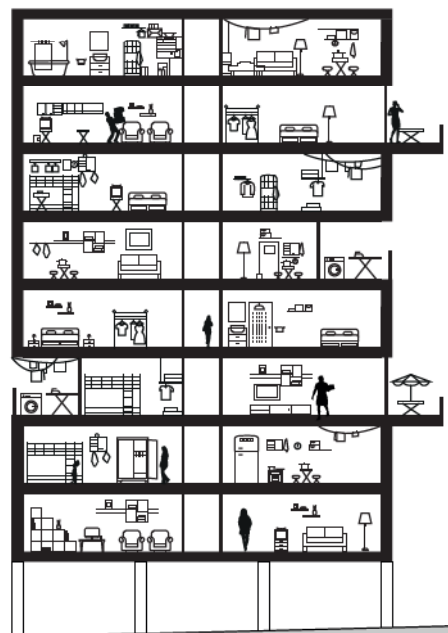
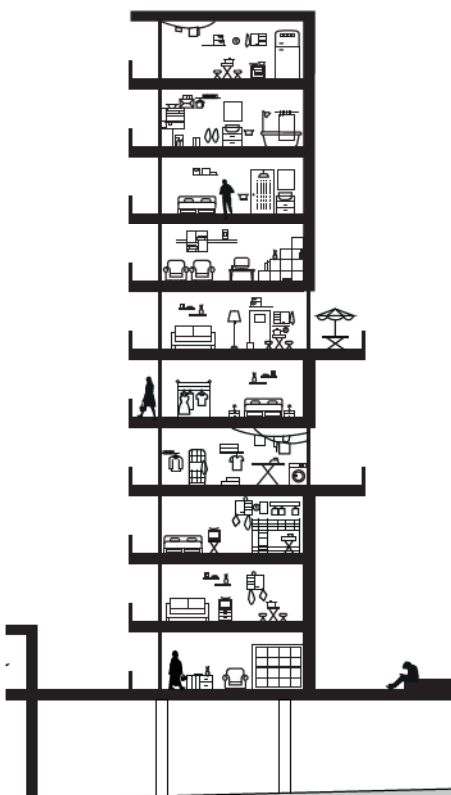
Throughout the history, it became clear that movements and their members are more than capable of organising their own housing. Within the search for a new, alternative way for mutirão, the idea consists of a skeleton which can be filled in. Just as the mutirão project in the past and present, the most technically demanding tasks are outsourced to a contractor. The skeleton itself is a technically demanding work, but once this is built, the *mutirantes* can take over and freely fill in the structure. The building can be adapted according to the needs of each family individually, as such one can have a terrace while another has an extra bedroom. The apartment can grow along together with the needs and capacity of each family.

A raster of 4,8 m x 4,8 m provides the base for compounding the different housing units. Not only movements, but also construction enterprises can implement their configuration of apartments. This way, the projects of social movements and contractors can exist side by side, following a previously defined urban compilation of rasters. Each apartment can be considered as a *plan libre* and several housing units can be combined in order to create communal facilities.

The standard raster becomes economical due the massive reproduction, highly contrasting the freedom of liberty it creates within. A standardised skeleton can be filled in according to the needs of movements. On top of that, the buildings on *pilotis* enable space for covered outdoor activities. This combination of rationalisation, freedom and individuality serves as an alternative path for mutirão.



SECTION OF POSSIBLE BUILDING LAYOUT, FILLED IN BY LIFE



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