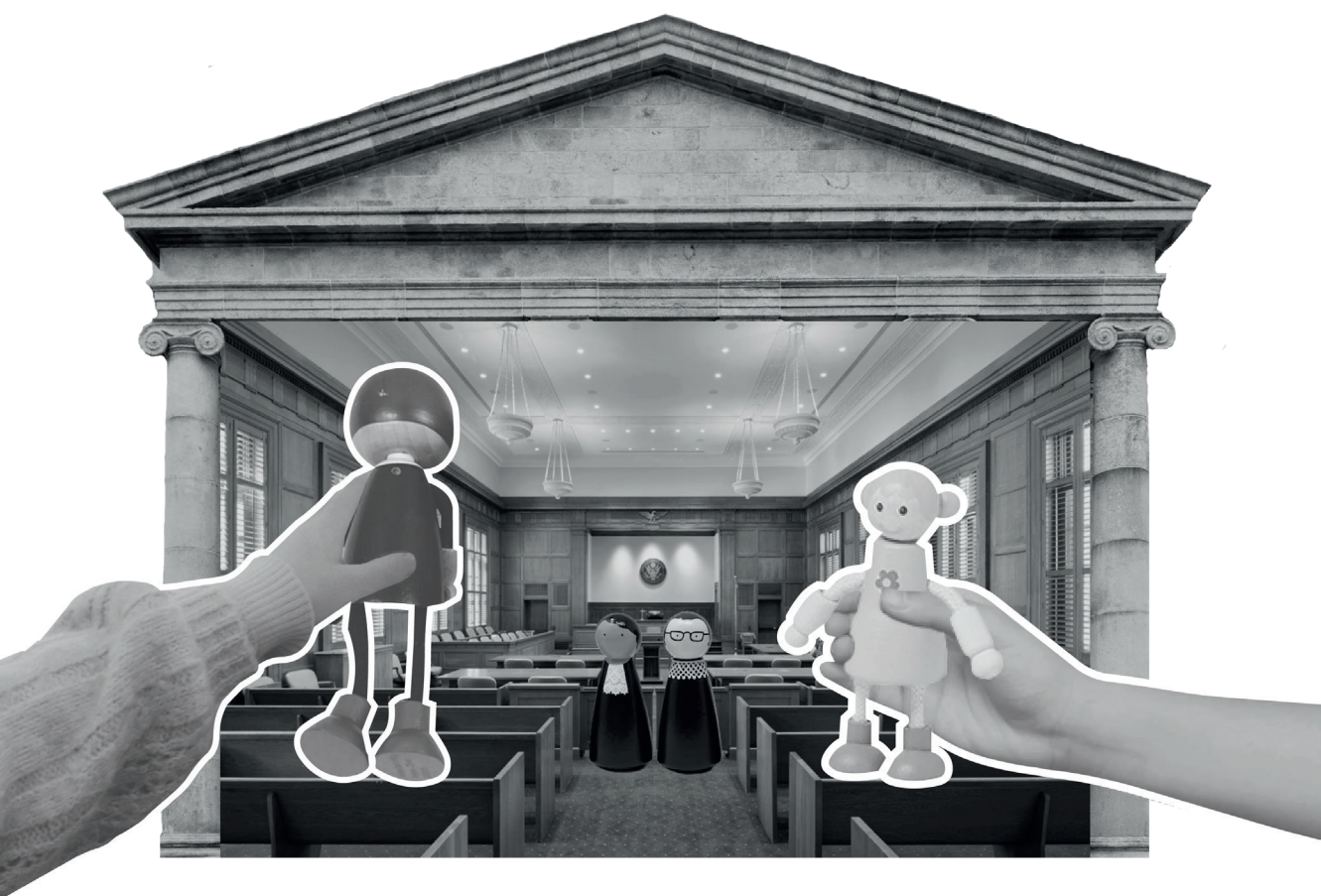


THE JUGENDGERICHT

The House for Youth Justice

RESEARCH PLAN



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INTRODUCTION

01

Crime and Law are two inseparable concepts. The law is there to establish standards, maintain order, resolve disputes, and protect liberties and rights. When one breaks the law they become offenders. To maintain order the offender will be called to court. Criminality, however, knows no bounds and is committed by people of all ages. For example, Juvenile criminality is a major issue throughout the world. There are signs of a global increase in youth, wherein most of the cause is attributed to areas of urbanization and modernization, along with immigration and economic factors (Juvenile Justice Around the World, n.d.).

The number of suspects under the age of 21 increased by 24,799 people, see figure 1.1. The number of suspected children increased by 34 percent, that of young people by 27 percent, and for young adults by 7 percent. (Meischen, D., 2023). Additionally, the crime ratio for juveniles is higher in comparison to those of adults, see figure 1.2 (1.2.1, 1.2.2 & 1.2.3).

To address youth criminality restorative justice is provided. Nations such as Germany, Canada, Australia, New Zealand, and Japan have long histories of integrating restorative justice techniques into their official response to problems with delinquency (Juvenile Justice Around the World, n.d.). The German criminal justice system differentiates between juvenile and general criminal law, providing

The city state Berlin, located in Germany, is no exception. Berlin has seen an eminent increase in the number of youth offender in 2022 in comparison to the previous year.

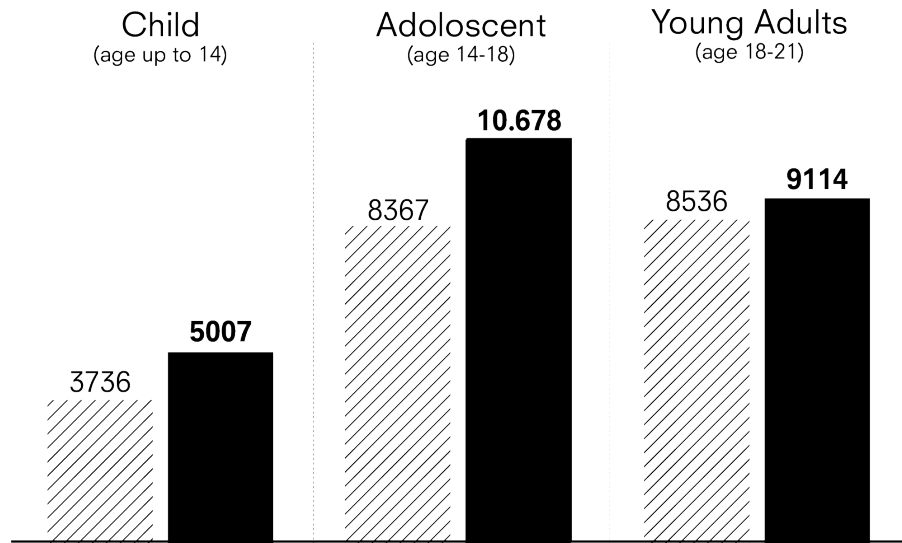


Figure 1.1: The amount of suspects increased in the year 2022 in comparison to the previous year in Berlin

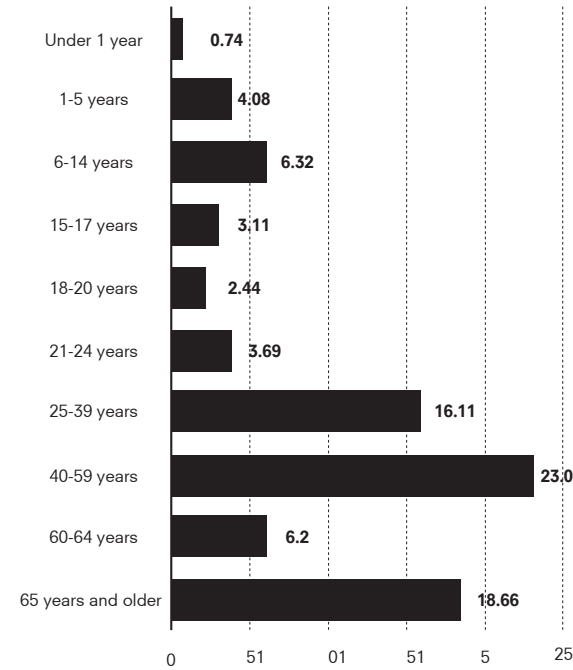


Figure 1.2.1: Population of Germany by age group, 2022 (in millions)

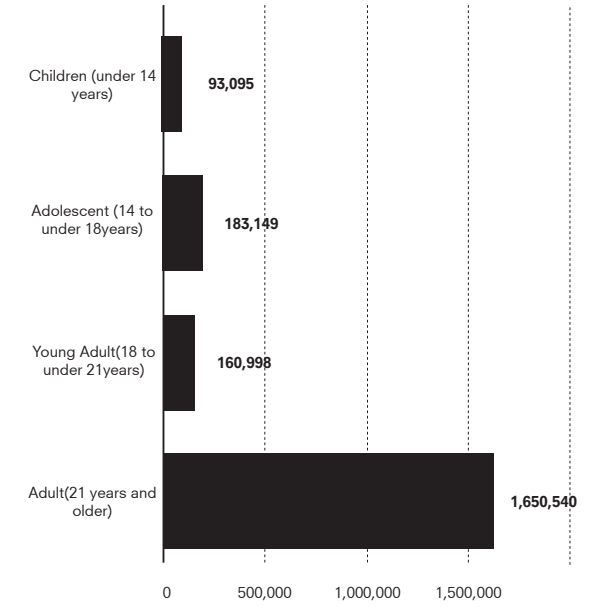


Figure 1.2.2: Number of crime suspects in Germany by age group, 2022

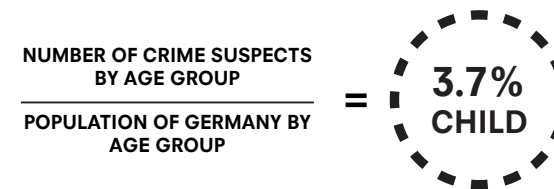


Figure 1.2.3: The crime ratio for juveniles for the ages 6 until 20

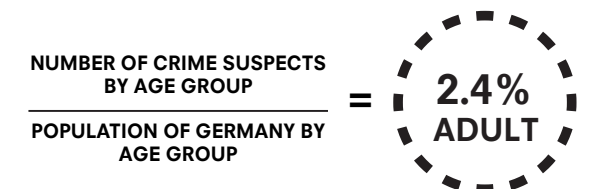


Figure 1.2.4: The crime ratio for adults aged 21 or more

for diverse measures and sanctions for adult, young adult and juvenile offenders (Parosanu, A., 2013). However, access to justice for children is limited in Germany, ranking 66th in the world (Access to Justice for Children: Global Ranking, n.d.). Access to justice is a fundamental right in itself and an essential prerequisite for the protection and promotion of all other human rights. The access to juvenile justice allows them to be able to participate in an effective and meaningful way in all matters affecting them, including criminal, civil and administrative proceedings (United Nations, 2013).

To make juvenile justice more accessible in Germany. It is proposed that a specialized courthouse is constructed in Berlin to diminish the number of youth offenders. A specialized court is a problem-solving court that focuses on one type of offense or type of person committing the crime (Problem-Solving Courts, 2020). Problem-solving courts use risk-need responsivity assessments and programs; encourage pro-social attitudes; and use the courts' authority to regularly monitor defendants' progress by rewarding compliance and sanctioning misbehavior, to ensure that a court case is seen as a window of opportunity that tackles the factors that lead to the crime (Bowen, P., 2014). Thus, the Jugendgericht (House of Youth Justice) of Berlin applies the juvenile law system of Germany and will provide proper access to child justice.

PROBLEM STATEMENT

At present no juvenile court exists in Germany. The lack of corporate unity makes the workflow in the courts difficult, but also the experience for all those concerned (Grobe, H., n.d.). Additionally, the crime ratio for juveniles is higher in comparison to those of adults, see figure 1.2 (1.2.1, 1.2.2, 1.2.3 & 1.2.4). When dividing "the number of crime suspects by age group" by "Population of Germany by age group", the crime ratio is derived. This shows a crime ratio of 3,7 percent for juveniles and 2,4 percent for adults.

Additionally, the need for a specialized courthouse comes from the fact that the German Juvenile law system is different from its general law system. The Juvenile Justice Act (JJA) is applicable on juveniles 14 to 18 years old, and, - under certain circumstances - on young adults, aged 18 to 21 years. Diversion is given priority, juvenile imprisonment is the "ultima ratio" if other formal sanctions like educational (directives, special care order) or disciplinary (warning, community service, fine, short detention) measures are not appropriate (Parosanu, A., 2013). Juvenile law emphasizes on the education of young persons and incorporates the principle of subsidiarity (or minimum intervention, priority of milder measures) and the principle of proportionality. Furthermore, there is the principle of rehabilitation, of legality, of certainty and of non-retroactivity (Parosanu, A., 2013). Regarding adults and young adults who do not fall within the scope of the JJA, the Criminal Code provides as main sanctions the penalties of imprisonment and fines and further auxiliary sanctions (such as driving ban). The basis of the juvenile law and that for adults is thus different (Parosanu, A., 2013). Germany has established a specialized Juvenile Court system. Nonetheless, the juvenile criminal procedures take place in youth chambers within local courthouses (Parosanu, A., 2013).

The Judiciary of Germany is based on two types of courthouses: Ordinary and Specialized. By knowing the distinction in courthouses, the new typology can be identified as a specialized courthouse, see figure 1.3.1 (Judiciary of Germany, n.d.).

INTRODUCTION

The Ordinary Courthouses consist of the Amtsgericht, Landgericht, Oberlandesgericht and the Bundesgerichtshof. The specialized courthouses are the administrative law court, federal labour court, social law court, fiscal court and federal law court. This study proposes the construction of a sixth specialized court: the youth court "The Jugendgericht". This court will aid with crime reduction as the rise in criminality amongst juveniles is concerning. In figure 1.3.2, a future scenario is shown with the inclusion of a juvenile courthouse in Berlin.



ADMINISTRATIVE LAW COURT



FISCAL COURT



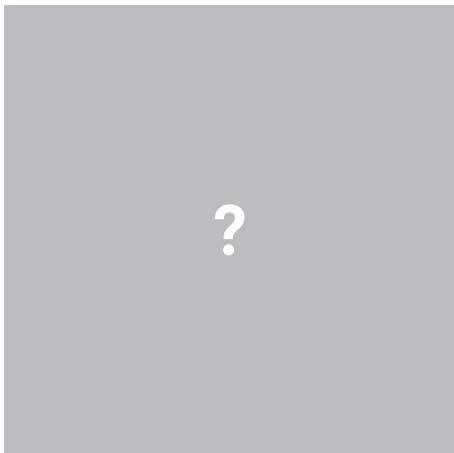
FEDERAL LABOUR COURT



FEDERAL PATENT COURT



SOCIAL LAW COURT



JUVENILE COURT

RESEARCH QUESTION

“ HOW WILL THE ARCHITECTURAL TYPOLOGY OF A COURTHOUSE THAT IS PROGRAMMED ONLY FOR JUVENILES IN GERMANY DIFFER FROM A GENERAL COURTHOUSE ”

- Obelandesgericht
- Amtsgericht
- Landgericht
- Specialized Courthouse
- Jugendgericht (Youth Court)



Figure 1.3.2: Future scenario of Berlin with the inclusion of a juvenile courthouse

RESEARCH FRAMEWORK

02

THEORETICAL FRAMEWORK

To answer the research question “How will the architectural typology of a courthouse that is programmed only for juveniles differ from a general courthouse in Germany?”, the research will focus on the exploration of a new specialized courthouse in Germany. The theories and concepts integrated in the study are the judiciary of Germany, psychology of specified target group, and ergonomics. These concepts will aid in the development of the program, site selection and analysis, and mass development of the typology.

The study on the psychology of the specified target group gives an impression on the experience of the user within ordinary courthouses and juvenile courthouses. It provides insights into the psychological well-being of the user and its impact on the architectural design of the building. Why do juveniles commit crimes? What are the leading factors? There is not one definite cause for youth crime; instead, a multitude of factors contribute to it. These factors are divided into three categories: individual, family, and community (Gharay, S., 2022). In figure 2.1, the three categories and their factors are visualized.

Ergonomics is about designing for people. It

is the study that focuses on the users’ needs and aims to increase efficiency, productivity and comfort (What is Ergonomics?, n.d.).

Additionally, it is important to identify the defined terms **courthouse** and **juvenile courthouse**. According to Cambridge Dictionary a **courthouse** is a building that contains rooms where trials and other legal cases happen. While **juvenile** stands for relating to a young person who is not yet old enough to be considered an adult. The combination of words leads to the **juvenile courthouse** meaning a building that contains rooms where trials and other legal cases happen of delinquent, neglected, or abused children. A **German juvenile courthouse** is another division of the local court, they preside over criminal offences committed by juveniles (aged 14 to 18) and young adults (aged 18 to 21).

Incorporating these theories, concepts and definitions lay out the physical and mental demands faced by employees and juveniles in the youth court. This research aims to provide an understanding of architectural strategies for creating more-befitting environments for users within the juvenile law system.

RELEVANCE

The research’s theoretical framework is of relevance as it addresses the gap in the court system of Germany. The research concentrates on the social design of a youth court and aims to fill gaps in theory by investigating the role of youth court design and its benefits for the users and environment. Furthermore, the research takes a user-centric approach that emphasizes on the juveniles that will experience the building, but also the employers within the facility to increase their efficiency and comfort creating guidelines that promote the design goal. Unfortunately, there are no articles addressing the importance of having a youth court in Germany, hence the relevance cannot be based on this, but this gap can be filled with this study.

RESEARCH FRAMEWORK



INDIVIDUAL

1. Mental health issues
2. Substance abuse
3. Exposure to violence



FAMILY

1. Parental neglect
2. Abuse
3. Raised in a dysfunctional home



COMMUNITY

1. Poverty
2. Lack of opportunity
3. Social isolation

Figure 2.1: Three categories and their factors that lead to youth criminality

RESEARCH METHODS

03

PROGRAM

The method of analysis will consist of online research, analytical diagrams, isometries and 3D massing. The study of the program is done with a case study which will consist of two juvenile courthouses and two general courthouses (with juvenile function included). These courthouses are all located in the USA to make the analysis comparison more accurate. Moreover, information on courthouses is generally limited and non-existent for youth courts in Germany. The analysis on general courthouses will help in the estimation of the spaces and functions within the building. It is also of utmost importance to understand the zoning as a courthouse is heavily focused on the flows of private, public and interface. From the case studies, see pages 19 until 22, the following could be derived:

1. General Information
2. Public vs Private Flow
3. Flow into the Courtroom
4. Program Division and Layout
5. Courtroom Layout

By comparing the courtroom layout, see page 25, it can be concluded that juvenile courtrooms have a smaller distance to the judge and a more intimate seating arrangement in comparison to general courthouses. By comparing the obtained square meters and percentage distribution of each space from the case studies, the average program structure can be established. Hereof, the Gross Floor Area (GFA) can be estimated and the program division is made, see page 26 & 27. The result of the research will be a coherent and comprehensive program for the Jugendgericht.

CASE STUDY 1



**JUDGE PATRICIA H. CLARK
CHILDREN AND FAMILY
JUSTICE CENTER**

Location
Seattle, Washington, USA

Construction Year
2019-2021

Architect
HOK

Court Type
Juvenile

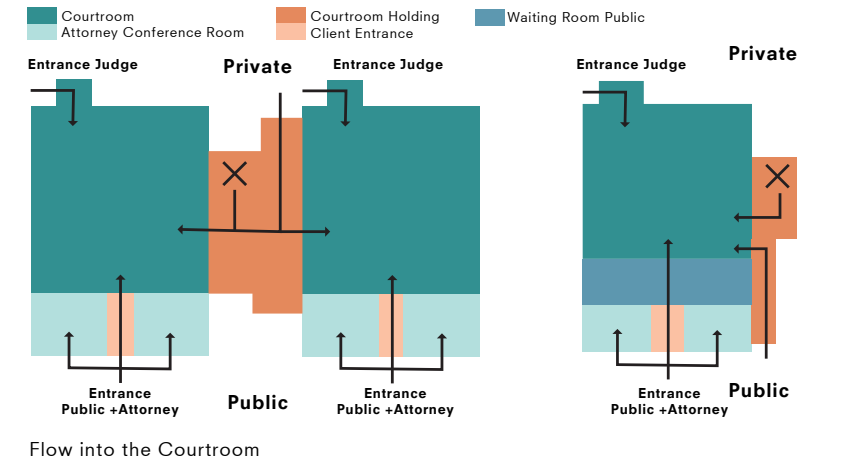
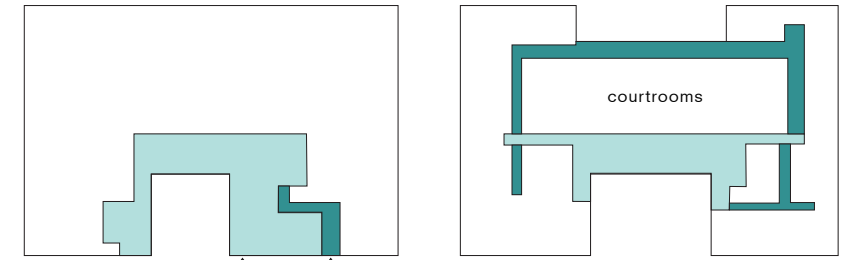
Number of Courtrooms
10

Building Area
22.110 sqm

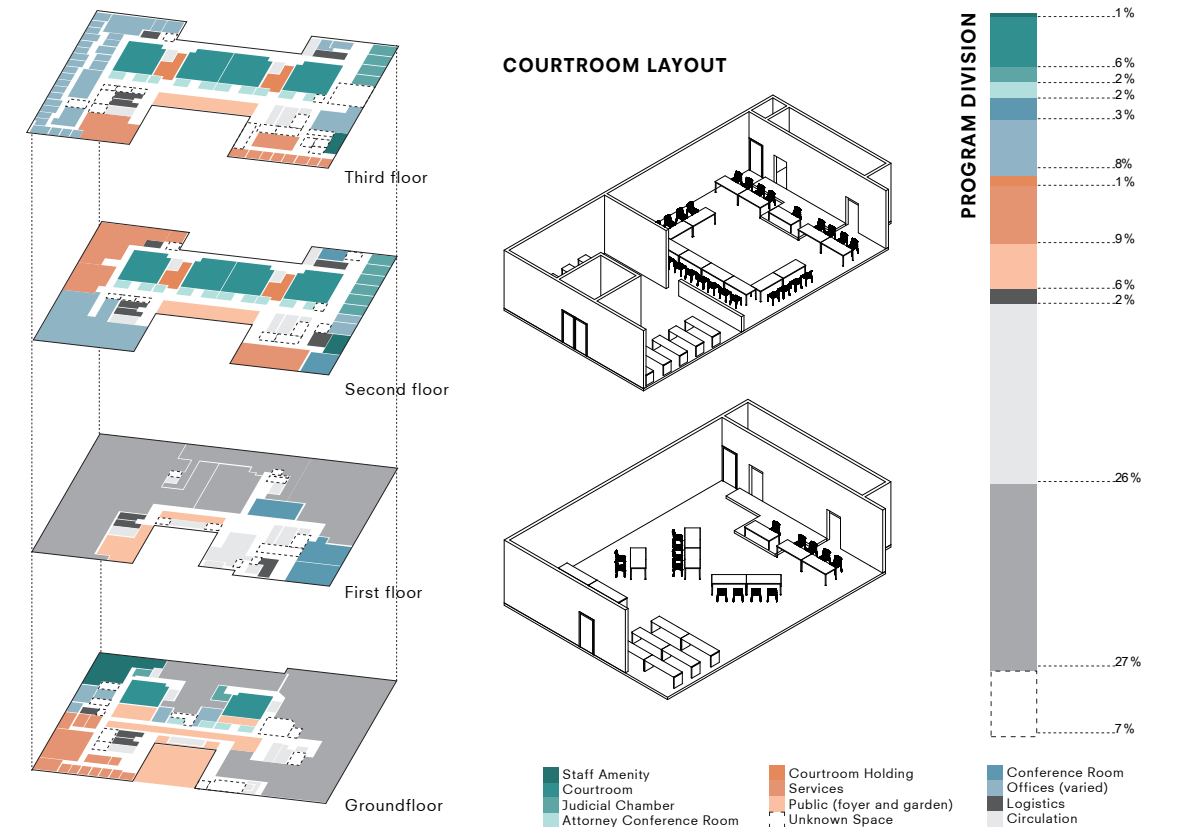
Ground Coverage
65 %

RESEARCH METHODS

Public vs Private Circulation



Flow into the Courtroom



CASE STUDY 2



ROBERT DEPKE JUVENILE JUSTICE COMPLEX

Location
Vernon Hills, Illinois, USA

Construction Year
2017

Architect
DLR Group

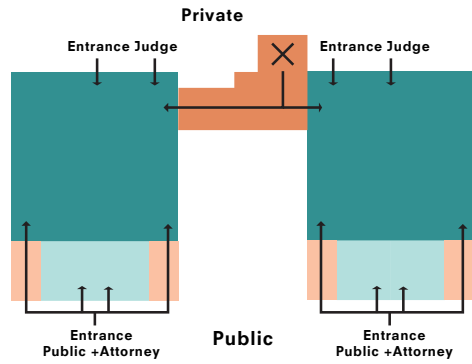
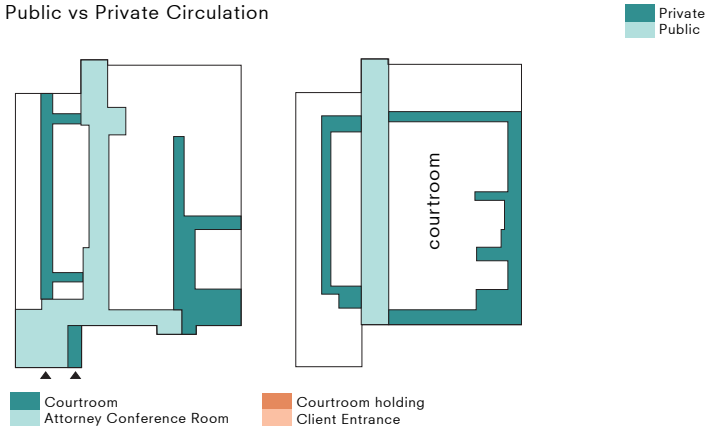
Court Type
Juvenile, Hearings

Number of Courtrooms
3

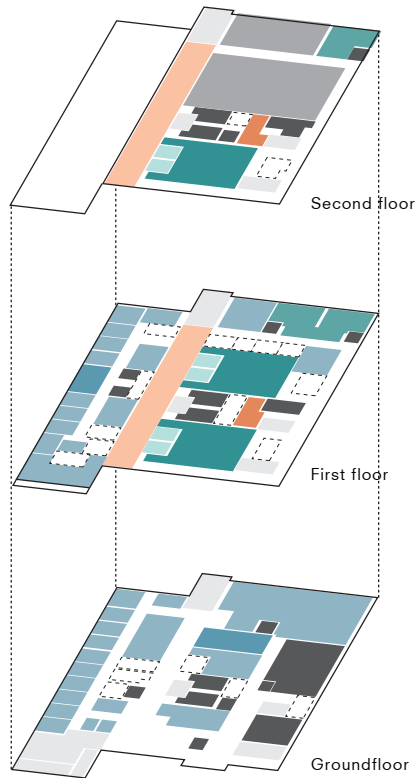
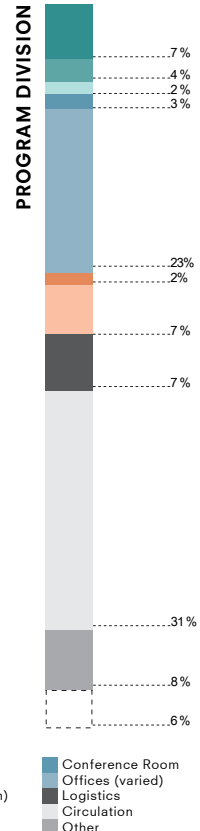
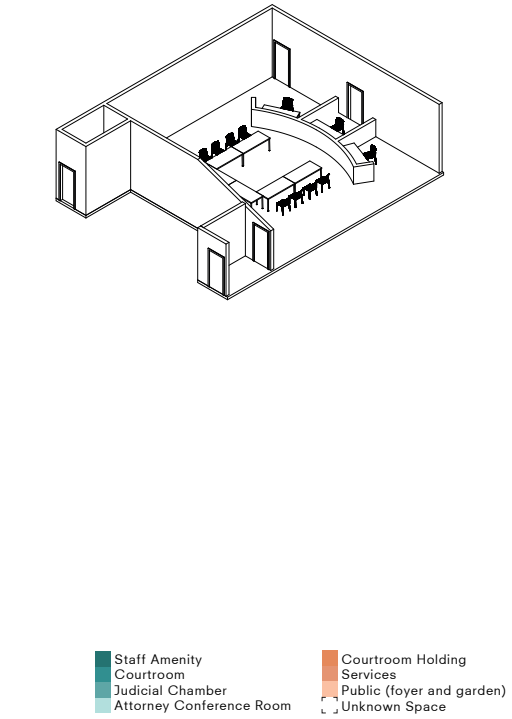
Building Area
5550 sqm

Ground Coverage
13 %

Public vs Private Circulation



COURTROOM LAYOUT



CASE STUDY 3



CALAVERAS COUNTY COURTHOUSE

Location
San Andreas, California, USA

Construction Year
2014

Architect
DLR Group

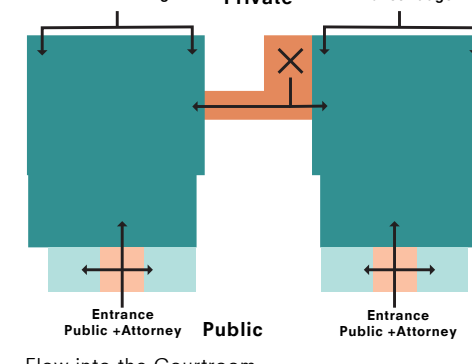
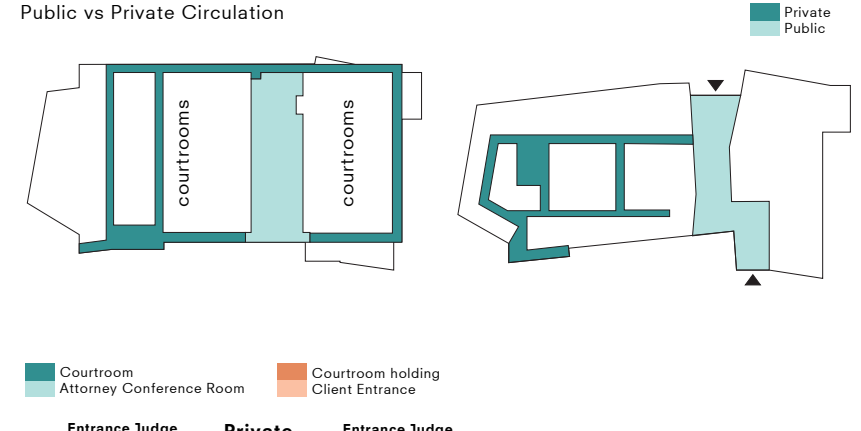
Court Type
Criminal, Civil, Domestic, Juvenile

Number of Courtrooms
4

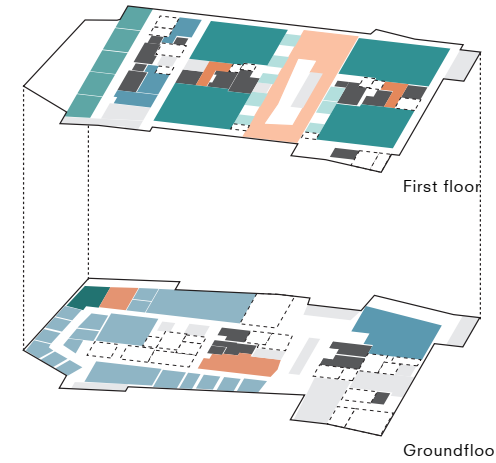
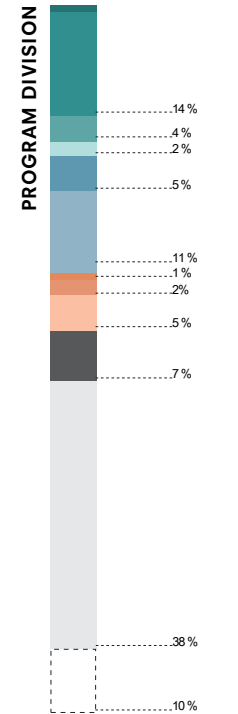
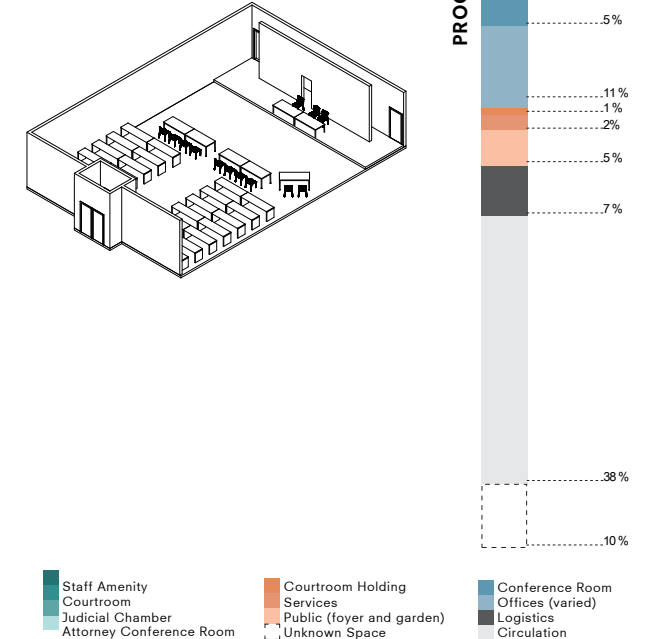
Building Area
5800 sqm

Ground Coverage
29 %

Public vs Private Circulation



COURTROOM LAYOUT



CASE STUDY 4



RICHARD E. ARNASON JUSTICE CENTER

Location
Pittsburg, California, USA

Construction Year
2010

Architect
HOK

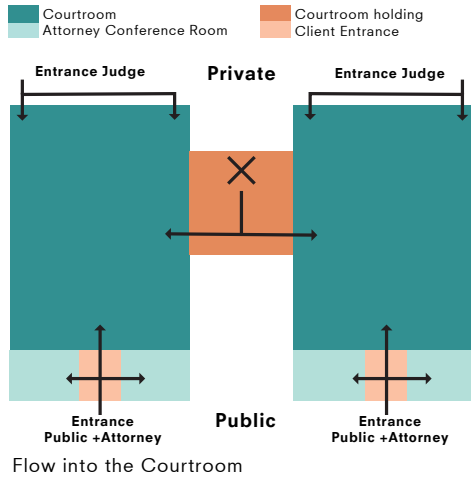
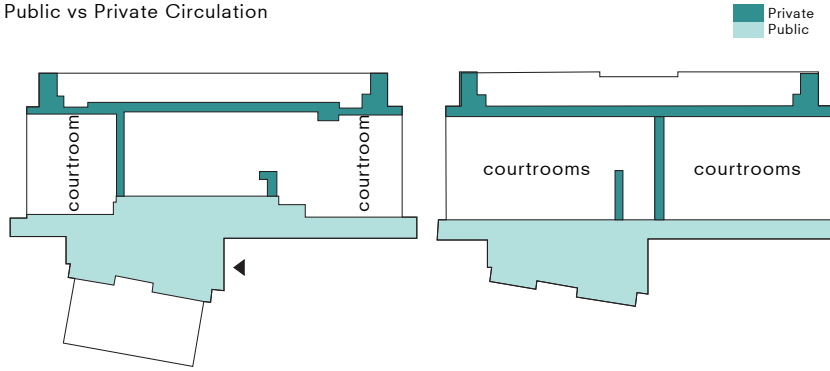
Court Type
Criminal, Civil, Traffic, Domestic, Juvenile

Number of Courtrooms
6

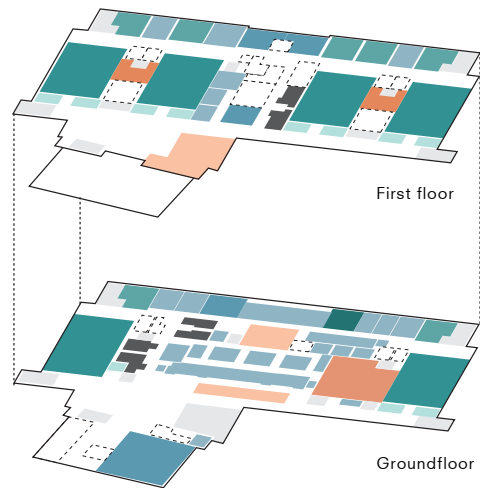
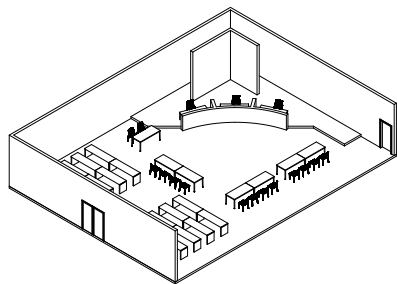
Building Area
9200 sqm

Ground Coverage
23 %

Public vs Private Circulation

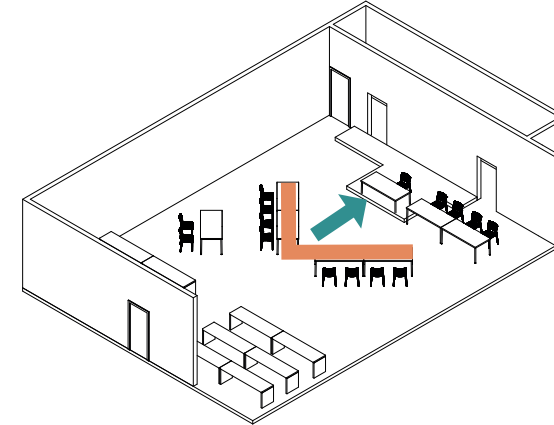
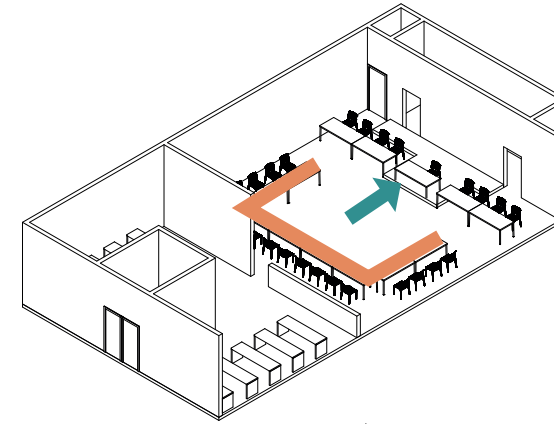


COURTROOM LAYOUT

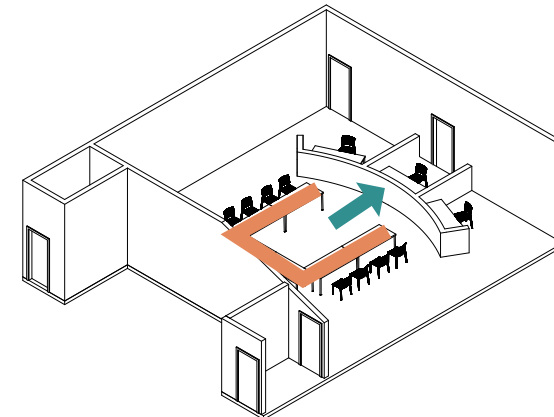


PROGRAM CONCLUSION

JUVENILE COURTHOUSES LAYOUT



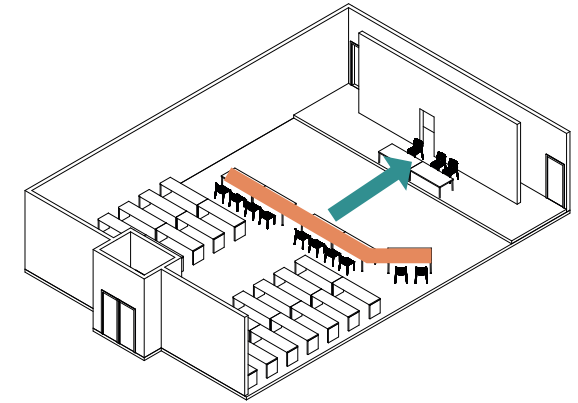
Judge Patricia H. Clark Children & Family Justice Center



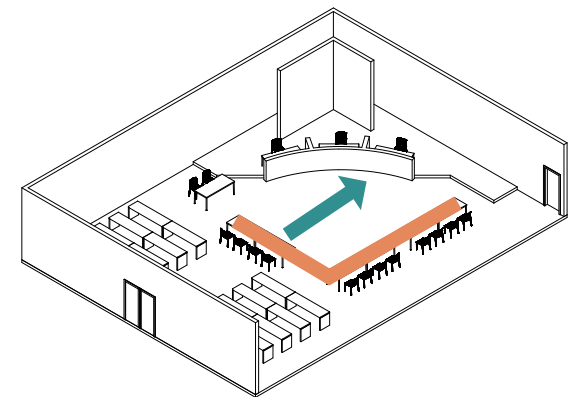
Robert Depke Juvenile Justice Complex

RESEARCH METHODS

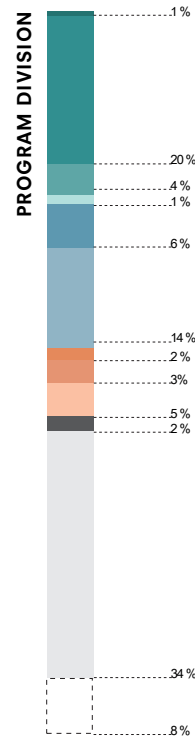
GENERAL COURTHOUSES LAYOUT



Calaveras County Courthouse



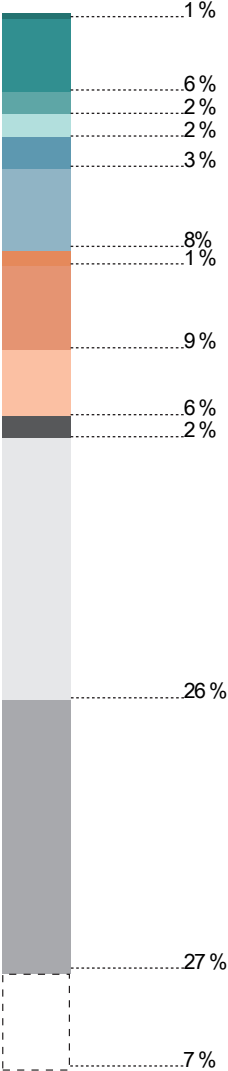
Richard E. Arnason Justice Center



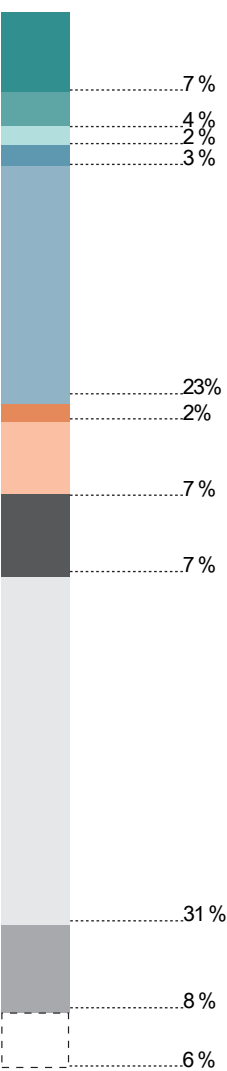
PROGRAM CONCLUSION

RESEARCH METHODS

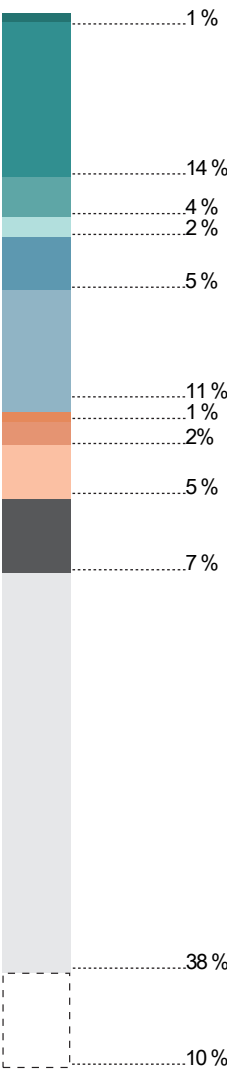
Judge Patricia H. Clark Children & Family Justice Center



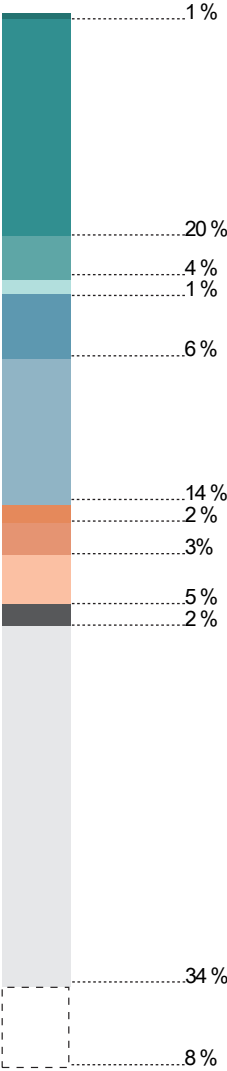
Robert Depke Juvenile Justice Complex



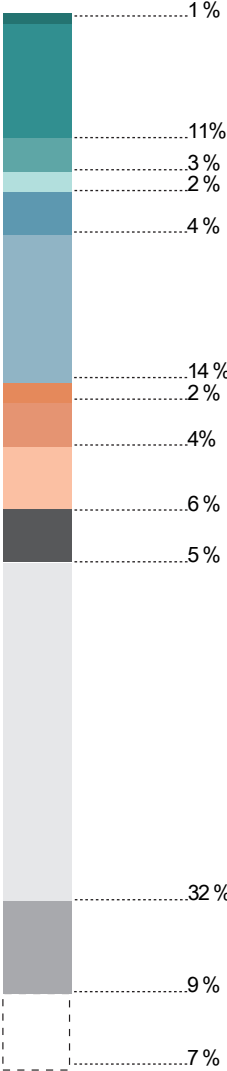
Calaveras County Courthouse



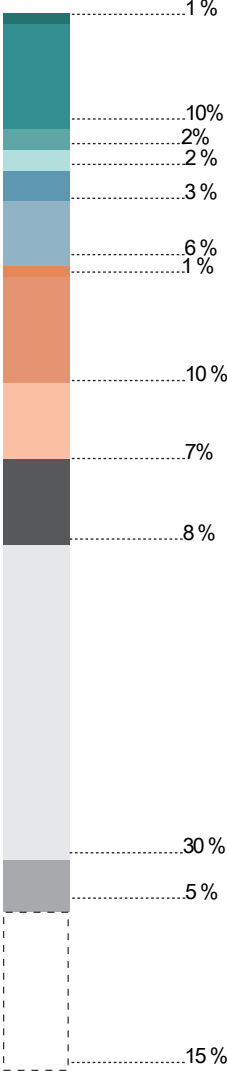
Richard E. Arnason Justice Center



Conclusion (average)



Proposed 10,000-15,000 m²



- Staff Amenity
- Courtroom
- Judicial Chamber
- Attorney Conference Room

- Courtroom Holding Services
- Public (foyer and garden)
- Unknown Space

- Conference Room
- Offices (varied)
- Logistics
- Circulation
- Other

CLIENT

The identification process of potential clients is primarily grounded in literature reviews and websites on Child and Youth services, Juvenile Law systems, and the Judiciary of German. Several critical factors are considered when selecting clients for the cargo terminal: the funding, ownership and function. This research helps to grasp an understanding on the hierarchy of courthouses and the legislation. Eventually, aiding in selecting the most appropriate stakeholders and users of the Jugendgericht. The main stakeholders responsible for this typology are the Government & Municipality, and the YWO, see figure 3.1.

The government is responsible for funding the youth service facilities. At the federal level, child and youth policy affairs are coordinated by the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth. The Ministry is the interface to the Federal Government and occupies a supporting and encouraging role on behalf of the child and youth services community of practice. Additionally, the government obliges the municipalities to assume the responsibilities and specifies how they must be fulfilled in terms of youth service (Child and Youth Services in Germany, n.d.).

The municipality, has statutory responsibilities by direction and responsibilities discharged on behalf of the state as they are in charge of determining what program to invest in on the local level. Each city and district in Germany has its own youth welfare office (YWO). When it comes to planning, ensuring and financing the provision of child and youth services, the municipal youth welfare offices play the main role (Child and Youth Services in Germany, n.d.).

Youth associations are key youth policy partners when it comes to social participation, defending the interests of children. Child and youth services in Germany encompasses various – at first glance very different – areas of work with children, adolescents, young

adults and their parents(Child and Youth Services in Germany, n.d.):

- Support for children in child day-care facilities and nurseries
- Supporting children and adolescents as part of youth work/youth social work
- Promotion of care and upbringing in the family through support programmes for parents
- Socio-educational support for parents; support for children, adolescents and young adults in difficult living circumstances, situations of conflict and emergencies; and participation services for young people with a (psychological) disability
- Sovereign tasks to protect children and adolescents.

RESEARCH METHODS

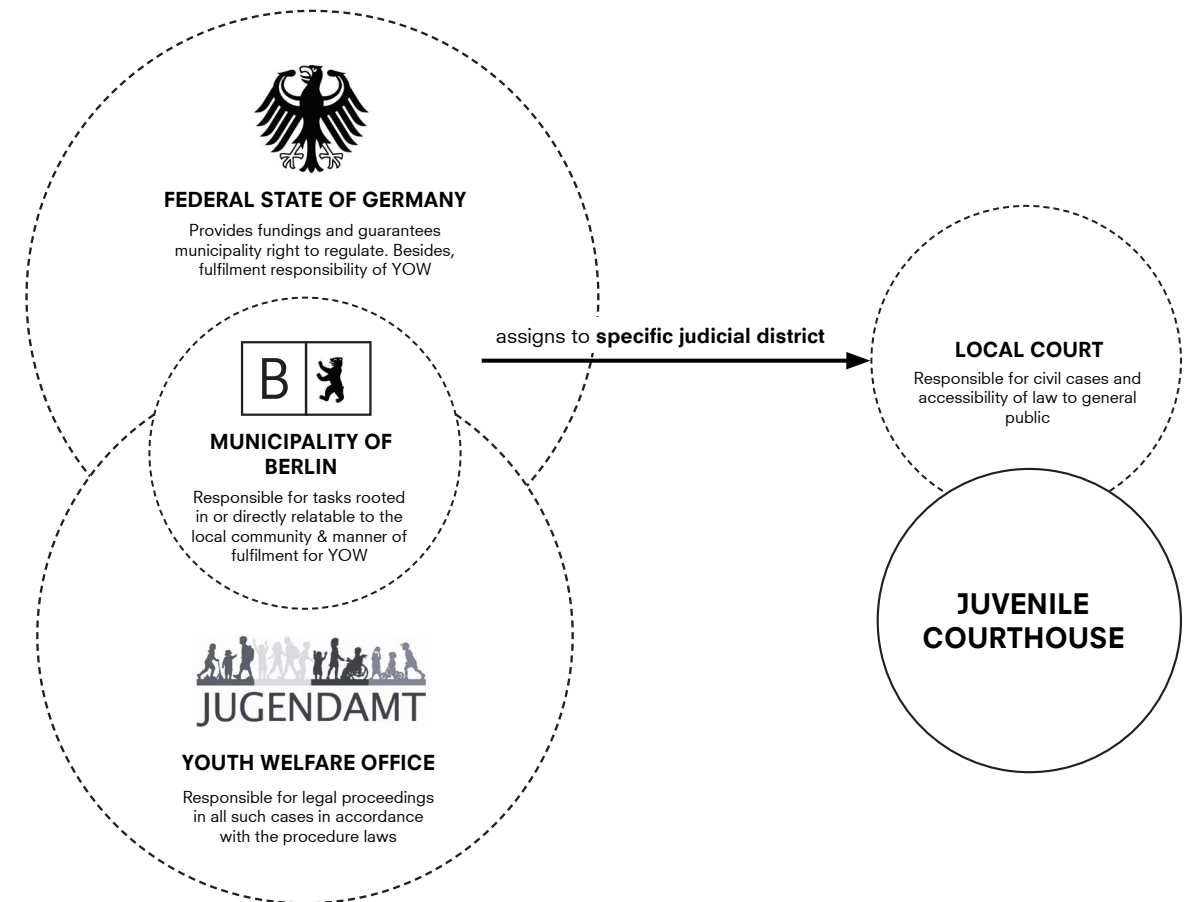


Figure 3.1.1: The main stakeholders that are responsible for the courthouse

SITE

The ideal location is decided based on two forms of site criteria: Typology and Digitalization. The typology criteria are based on the client and program as a result of descriptive and qualitative data collecting and mapping, see figure 3.2 and 3.3:

Peak in Criminality – High crime district

Place of Law – Within a judicial district

Presence of Education – Within proximity of education facilities

The Digitalization site criteria are determined on the hand of a distinct topic (economy, health, material, digitalization or energy) which is worked out in a group of other students. For this study the assigned topic is digitalization. Based on this topic a strategy is formed wherein inclusion of data centers in public buildings (hospital, airport, train station, courthouse, school, parliament, library, museum and opera) was decided on. Further analysis, done on the hand of mapping and quantitative data collection, aided in the selection of the most befitting criteria strategy, see figure 3.4:

Data Display - Within a proximity of 1km from a train station

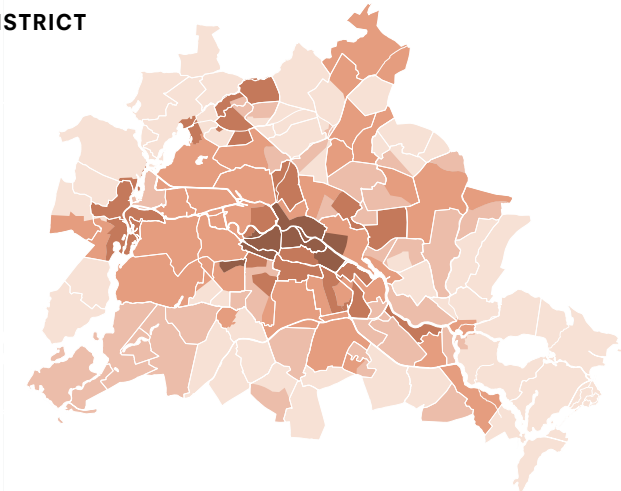
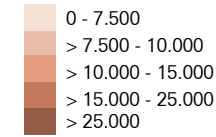
Data Decarbonization - cool waterways and wind areas to reduce energy footprint

Data Decentralization – At least 1.5 km apart from existing data centers

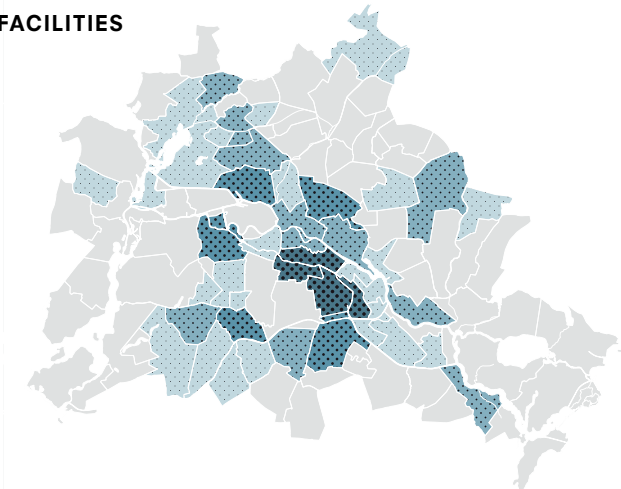
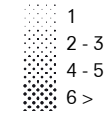
By ranking the named criteria from high to low priority an assessment could be made to select the most suitable region for the Jugendgericht, see figure 3.5. This would be a neighbourhood in the district Neukolln. However, to properly select a site location an additional site selection criteria was made by rank in neighbourhood scale, see figure 3.6. The maps for the site criteria can be viewed on the pages 34 until 36. By overlapping the data, see page 37, the site “Mittelweg 30, Neukolln, Berlin” was selected.

RESEARCH METHODS

CRIMINALITY RATIO P. DISTRICT



PROXIMITY EDUCATION FACILITIES



JUDICIAL DISTRICT

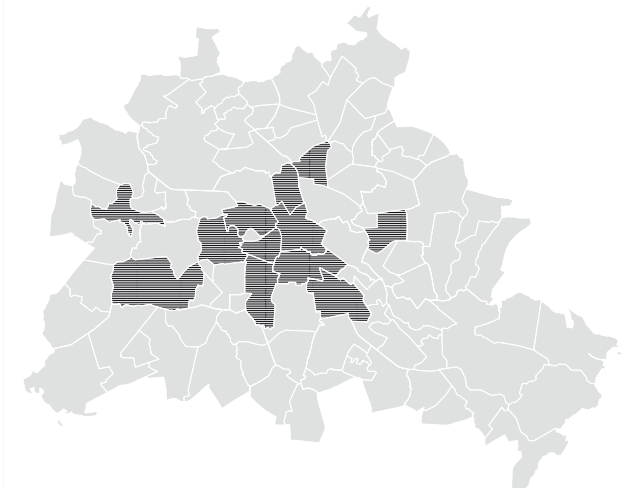
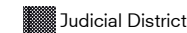


Figure 3.2: The Typology Criteria Maps

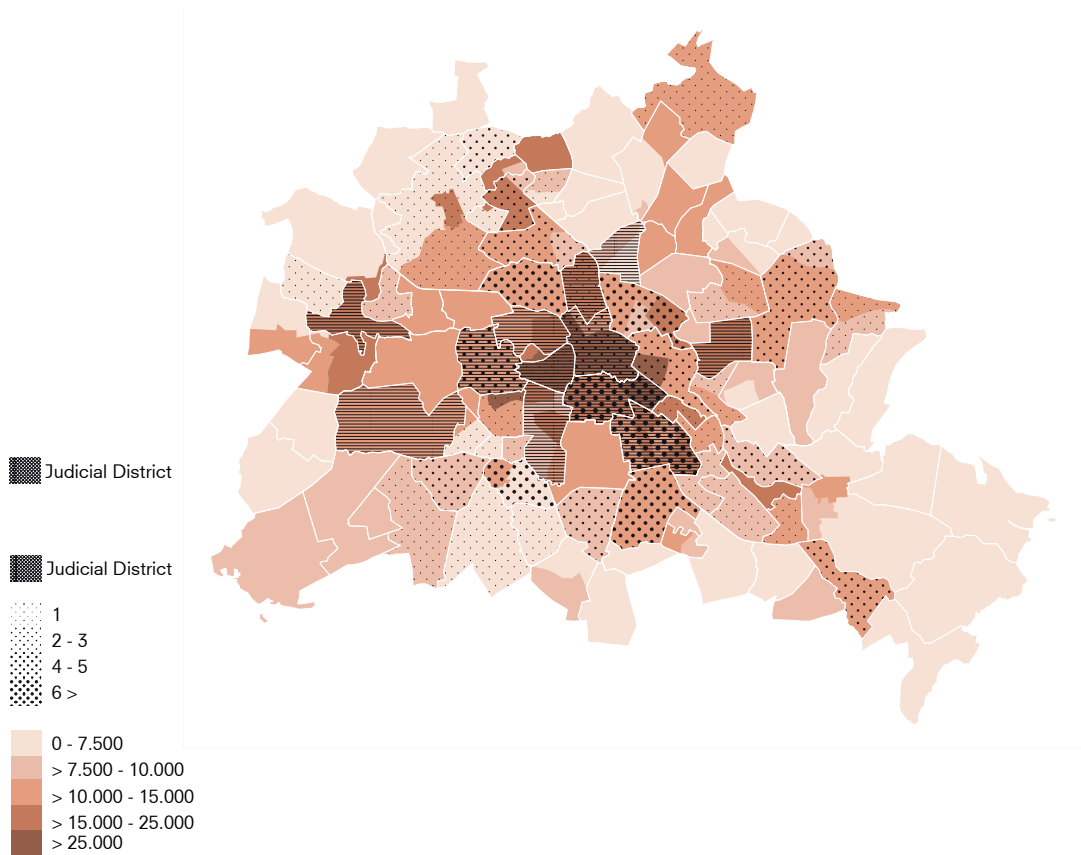
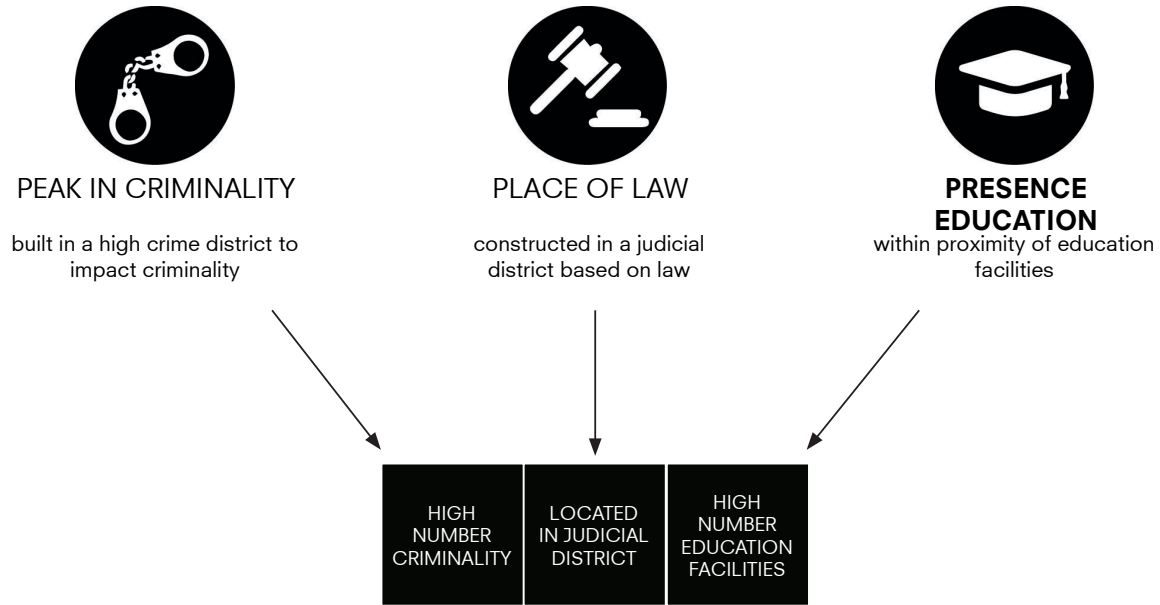


Figure 3.3: The Typology Criteria and Overlapped Map

RESEARCH METHODS

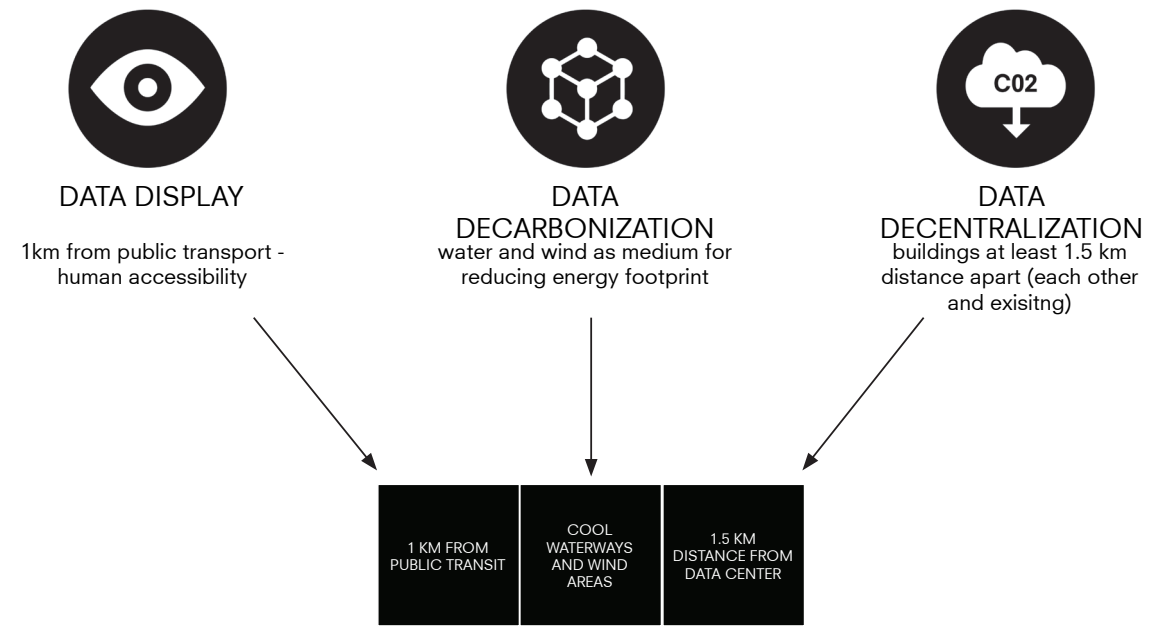


Figure 3.4: The Digitalization Criteria and Map

LOCATION SELECTION CRITERIA

HIGH PRIORITY cannot be compensated	HIGH NUMBER CRIMINALITY	LOCATED IN JUDICIAL DISTRICT	HIGH NUMBER EDUCATION FACILITIES	
	MEDIUM PRIORITY important qualities	1 KM FROM S-BAHN	PRESENCE YWO (youth welfare office)	1.5 KM DISTANCE FROM DATA CENTER
	LOW PRIORITY can be compensated	COOL WATERWAYS AND WIND AREAS	PRESENCE POLICE STATION	APPROXIMITY TO SCHOOL FACILITIES

SITE SELECTION

HIGH PRIORITY site selection	BUILDABLE GROUND	TRANSIT POSSIBILITIES	KEY BUILDINGS (YWO, police, school)
	MEDIUM PRIORITY site selection	TRAFFIC DENSITY	CONNECTION TO GREENERY

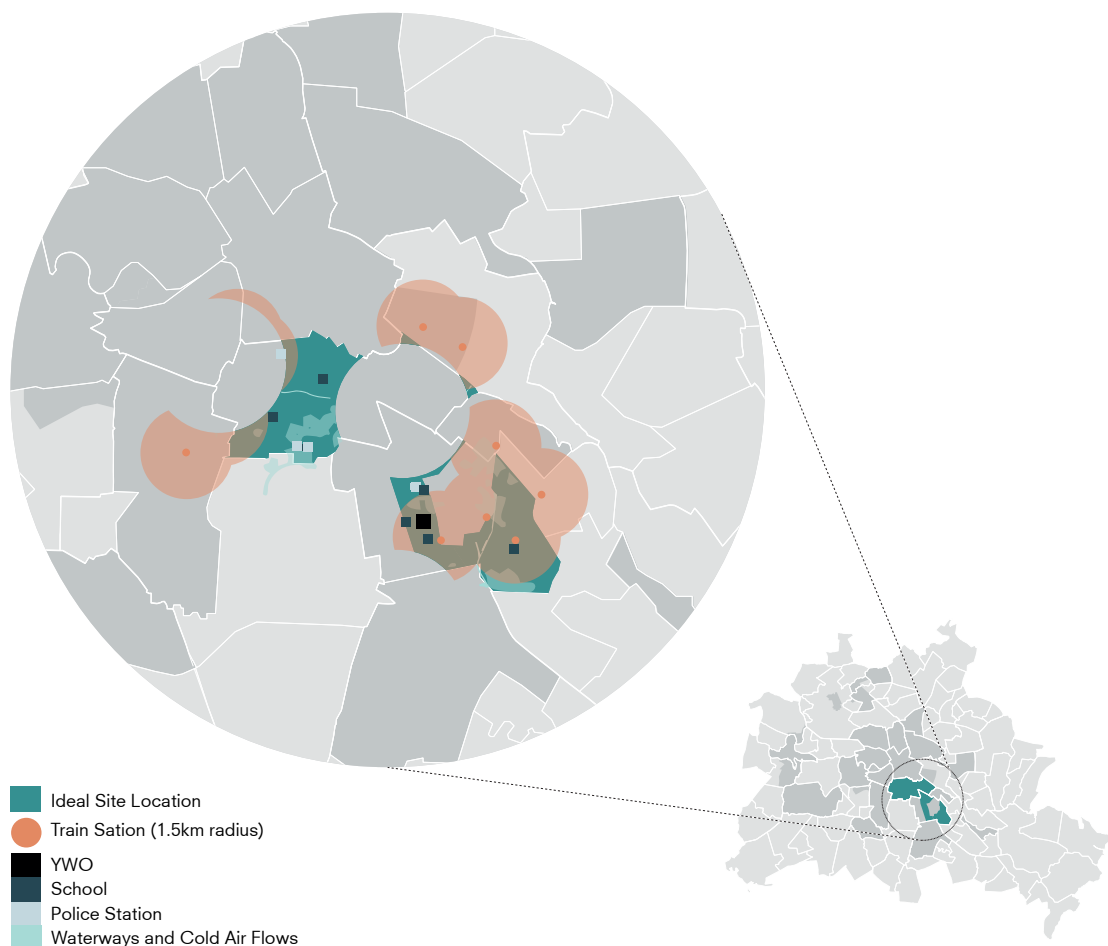


Figure 3.5: The Typology Criteria and Overlapped Map

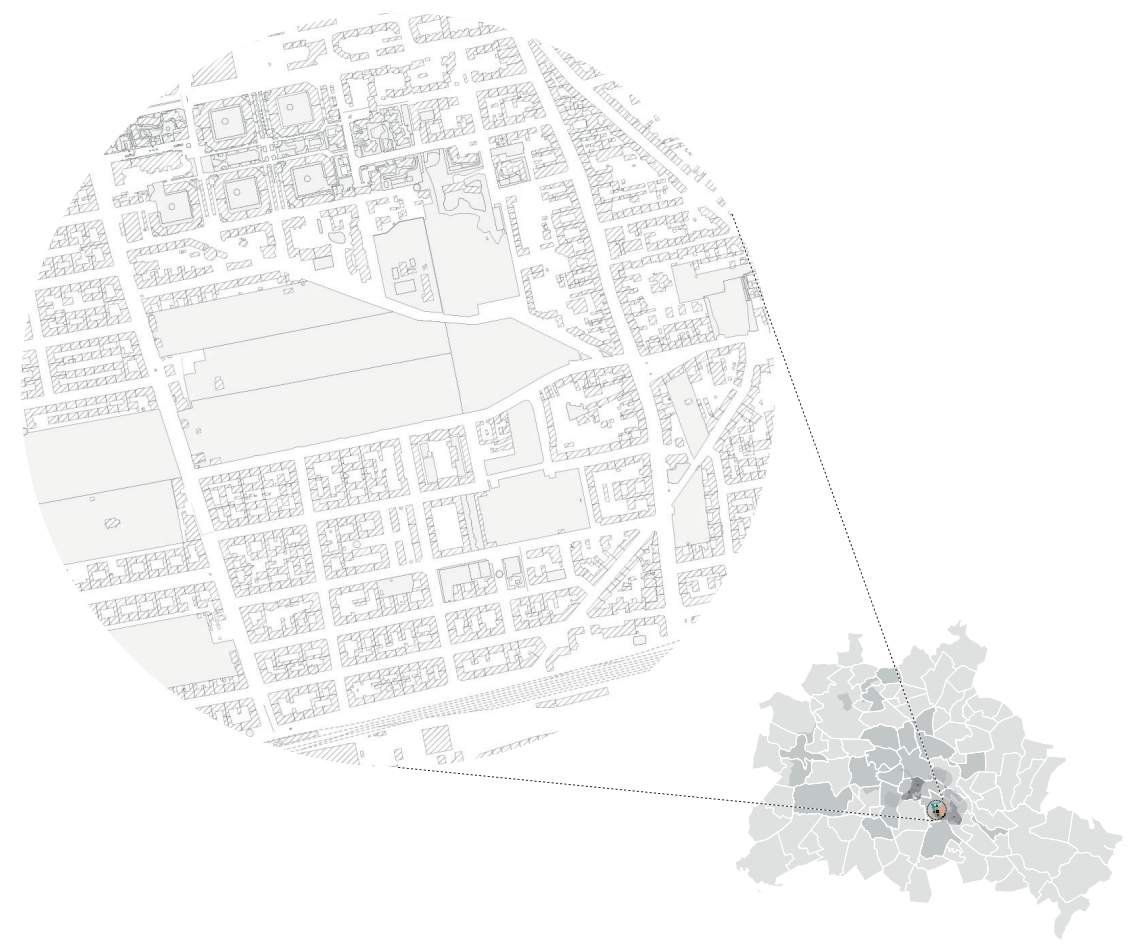
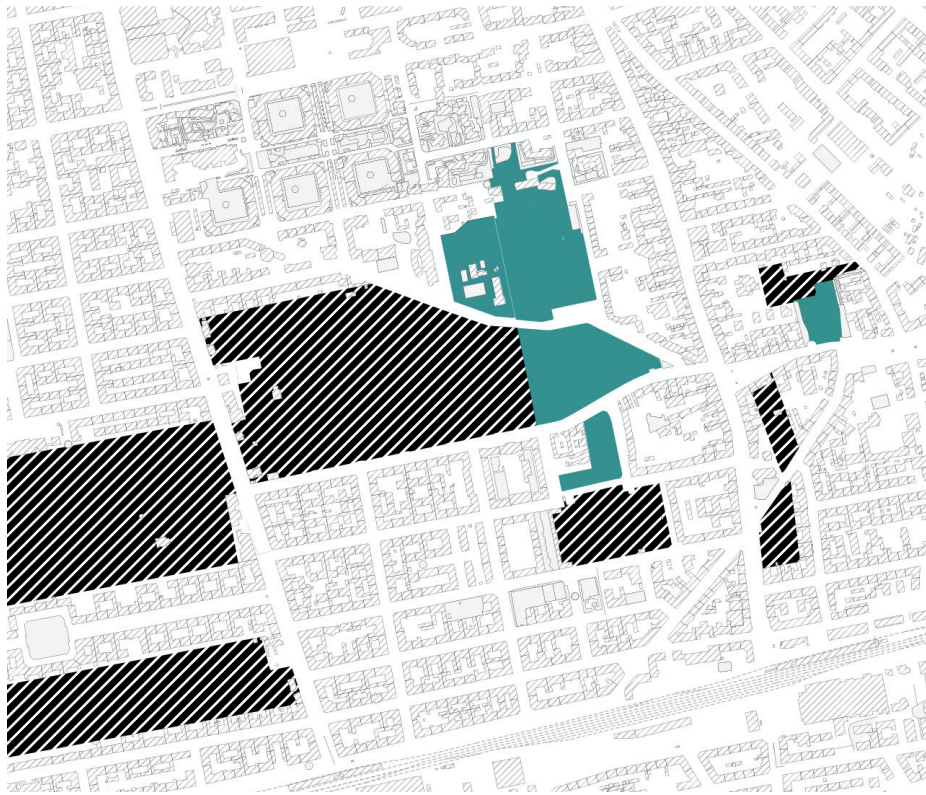


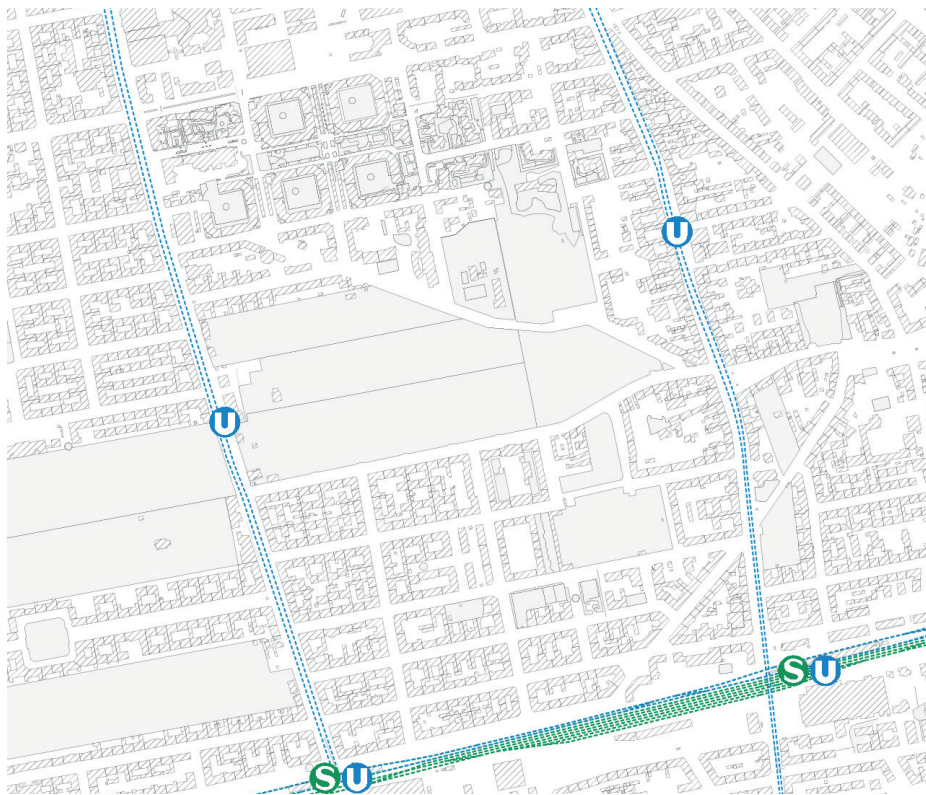
Figure 3.6: The Site Selection Criteria and Selected Neighborhood

BUILDABLE GROUND



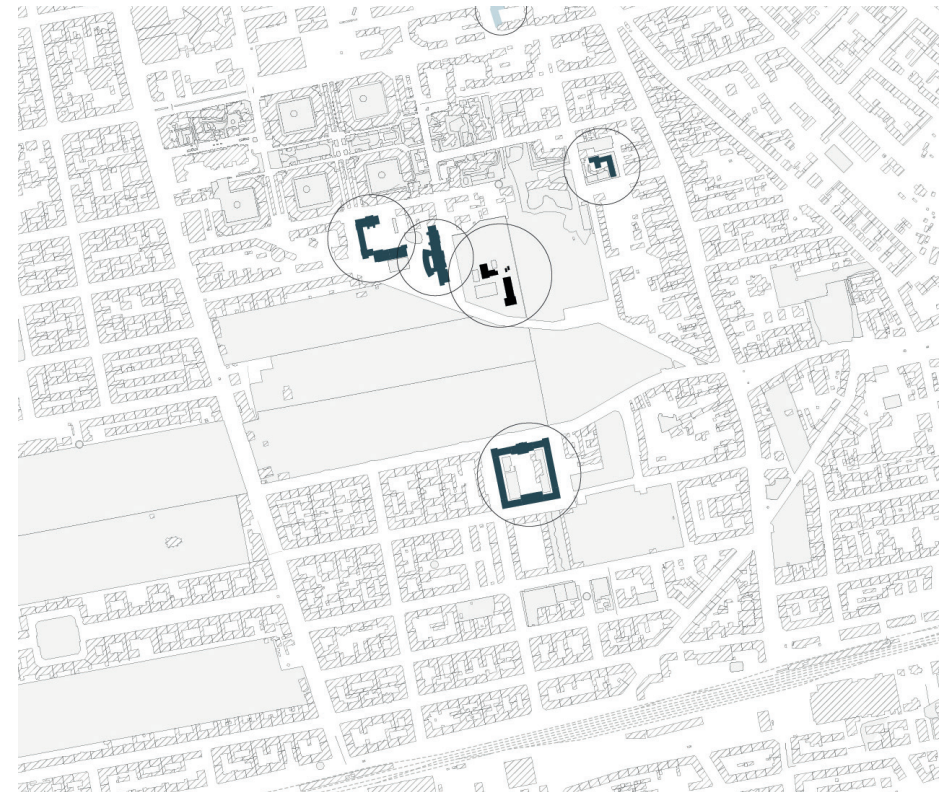
- Buildable
- Not Buildable

TRANSIT POSSIBILITIES



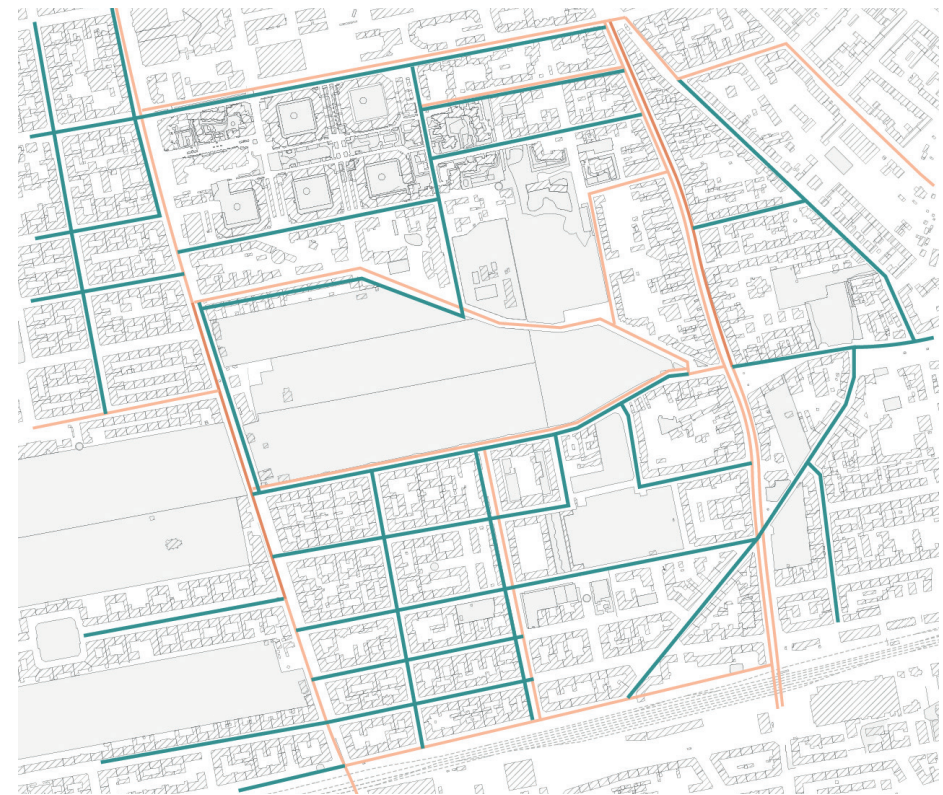
- S S-bahn
- U U-bahn

KEY BUILDINGS



- YWO
- School
- Police Station

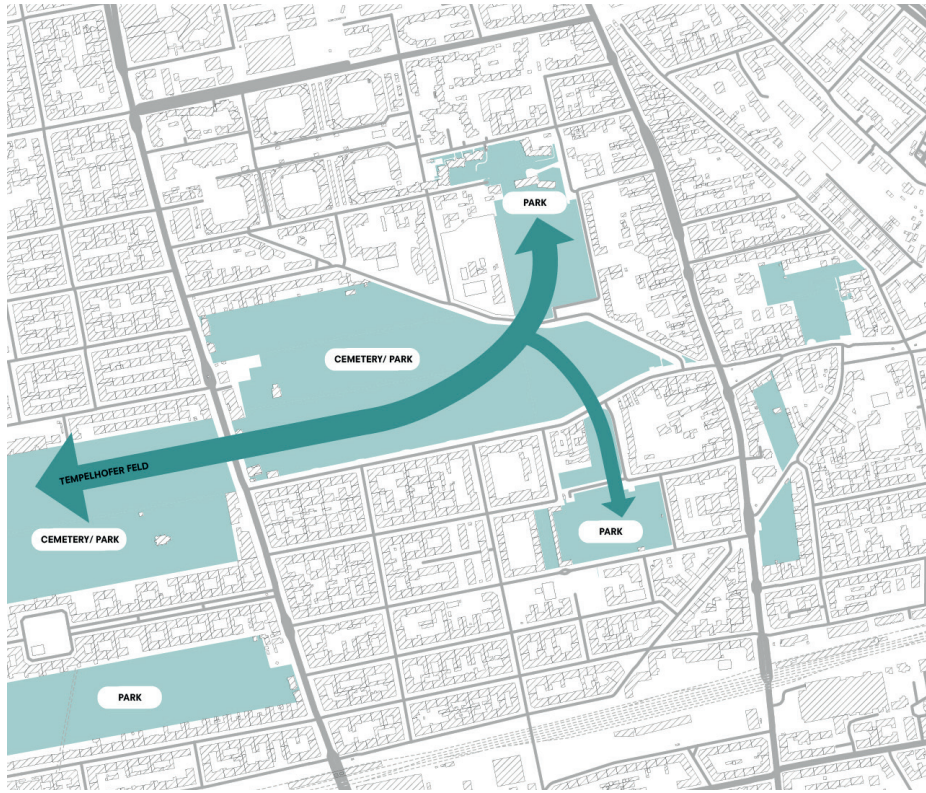
TRAFFIC DENSITY



- No Delay
- Minor Delay
- Major Delay

RESEARCH METHODS

GREEN FUNCTION AND FLOW



Greenery

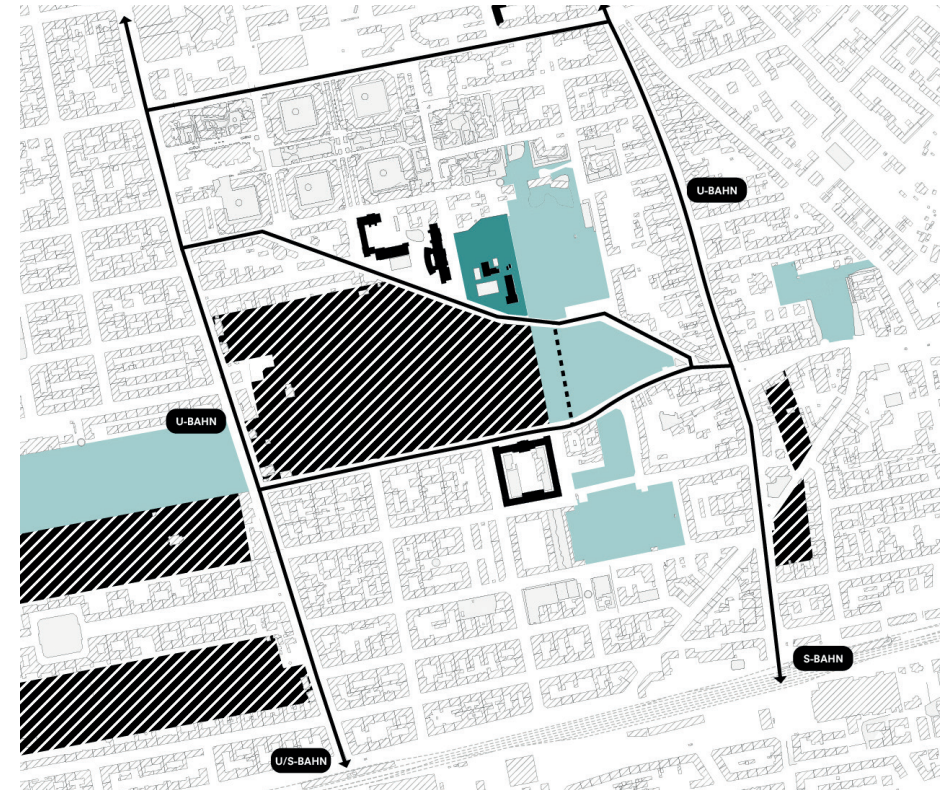
POPULATION DENSITY



5 - 30
31 - 70
71 - 150
151 - 250
251 - 350
351 - 450
451 - 550
> 550

SELECTED SITE & COMPOSITION

RESEARCH METHODS



Site Location
Park
Non-Buildable Ground
Key Buildings

DESIGN BRIEF

04

To determine a detailed program for the building, the users had been determined. The user group are divided into **court employees, institution employees** and **visitors of the court**. Subsequently, the obtained program from the case studies are divided in the key programs: the **youth assistance service program** and the **youth court**. However, an additional program was added which is the **probationary housing** and **data center**. Of the three programs the youth court remains the core of the building.

Based on the acquired data from the case studies a program division estimation is made, wherein the key programs were assessed on their percentage of required square meters. Afterwards, the sub-spaces within these programs have been determined based on case study and literature reviews on court design. Courthouses share similarities in the key spaces of their user such as the judicial chamber, courtroom and conference room. The occupied space of the 15.000 to 20.000 square meter building is divided per program group in percentages, based on the square meters of the detailed program and the needs of the building, see figure 4.1.1.

Lastly, zoning and flows are important in a courthouse, hence a relationscheme of the program assesses the position of the functions in the building. Facing the public are the youth assistance programs and the courtroom with attorney conferences. On the back side, are the private offices of the employers in the building and data center. The Probationary Housing is also leaning towards a private setting, see figure 4.2. This division is how almost each courthouse has done it based on the case studies, since public and private flows are divided in the building.

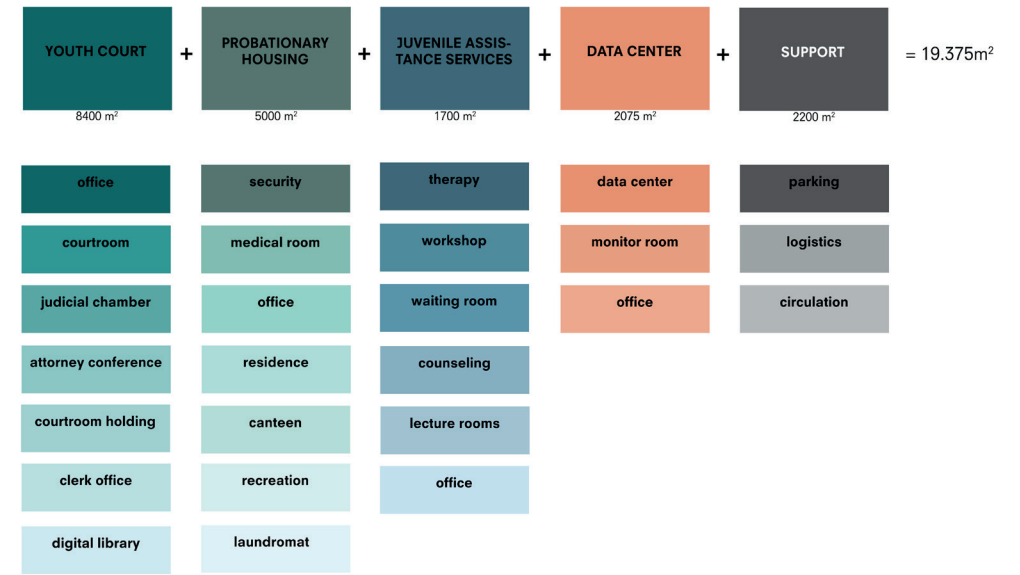


Figure 4.1.1: Program division for juvenile courthouse in Berlin

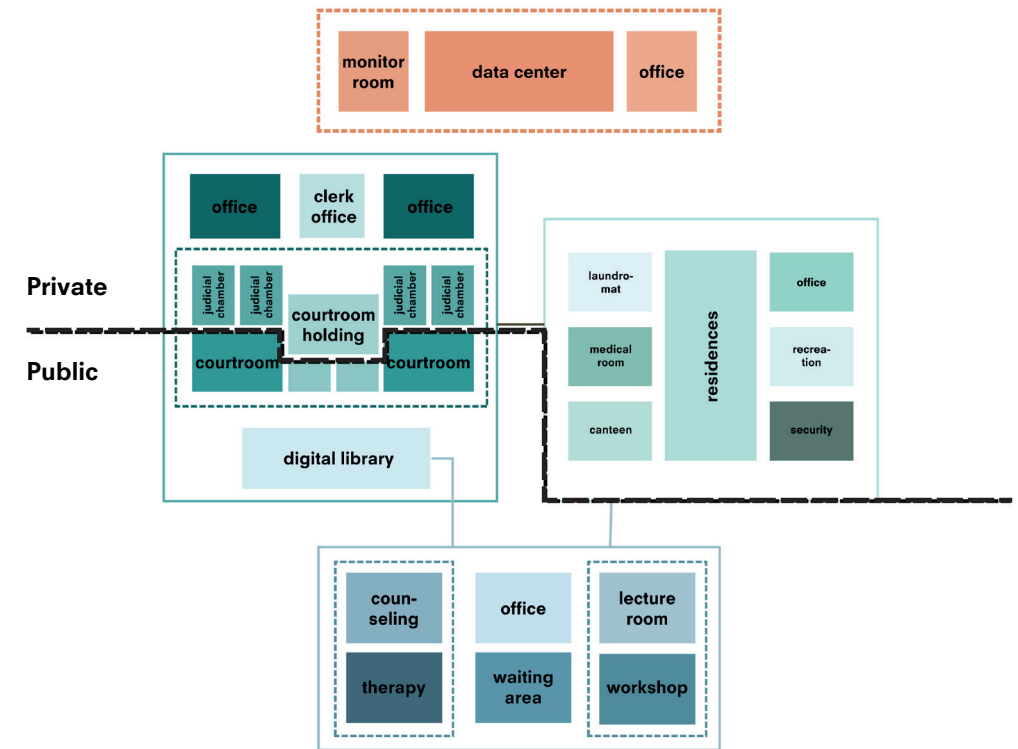


Figure 4.1.2: Program relationscheme for juvenile courthouse in Berlin

WHAT IS THE AMBITION?

A CARE AND PREVENTION MODEL FOR JUVENILE OFFENDERS FROM NEUKÖLLN TO WHOLE OF BERLIN

announced by Education and Youth Senator **Katharina Günther-Wünsch** and Youth State Secretary **Falko Liecke** with money from the Senate



CLIENT

The prevention project which is funded by the Senate works with particularly difficult young people who have already attracted attention with multiple offences such as fights and thefts, attend school only sporadically and also have massive problems in other ways. The involved responsible actors are youth welfare offices, schools, social pedagogues, police, judiciary and the government. These actors work closely together to prevent a further slide into serious crime. There is an exchange of information between the actors, e.g. the police and youth welfare offices, see figure 4.2.1 and 4.2.2. With the data exchange all involved actors can coordinate their actions, consult in case conferences and inform each other about what is to happen to a criminal youth and his family, making the process more efficient (Meischen, D., 2023).

The judiciary will be the youth court, courts can impose orders, they can monitor the orders, they can issue restraining orders and impose curfews on the youth offender. In contrast, the Youth Welfare Office is incapable of that without the support of the

DESIGN BRIEF

parents, and, depending on the milieu in which the parents operate, there could be no cooperation at all (Whittle, 2023).

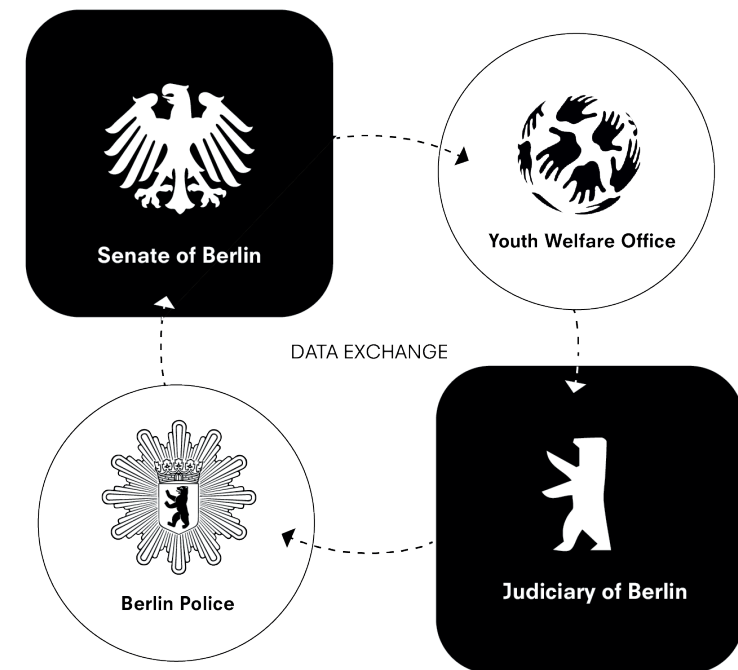


Figure 4.2.1: Data Exchange between all involved actors

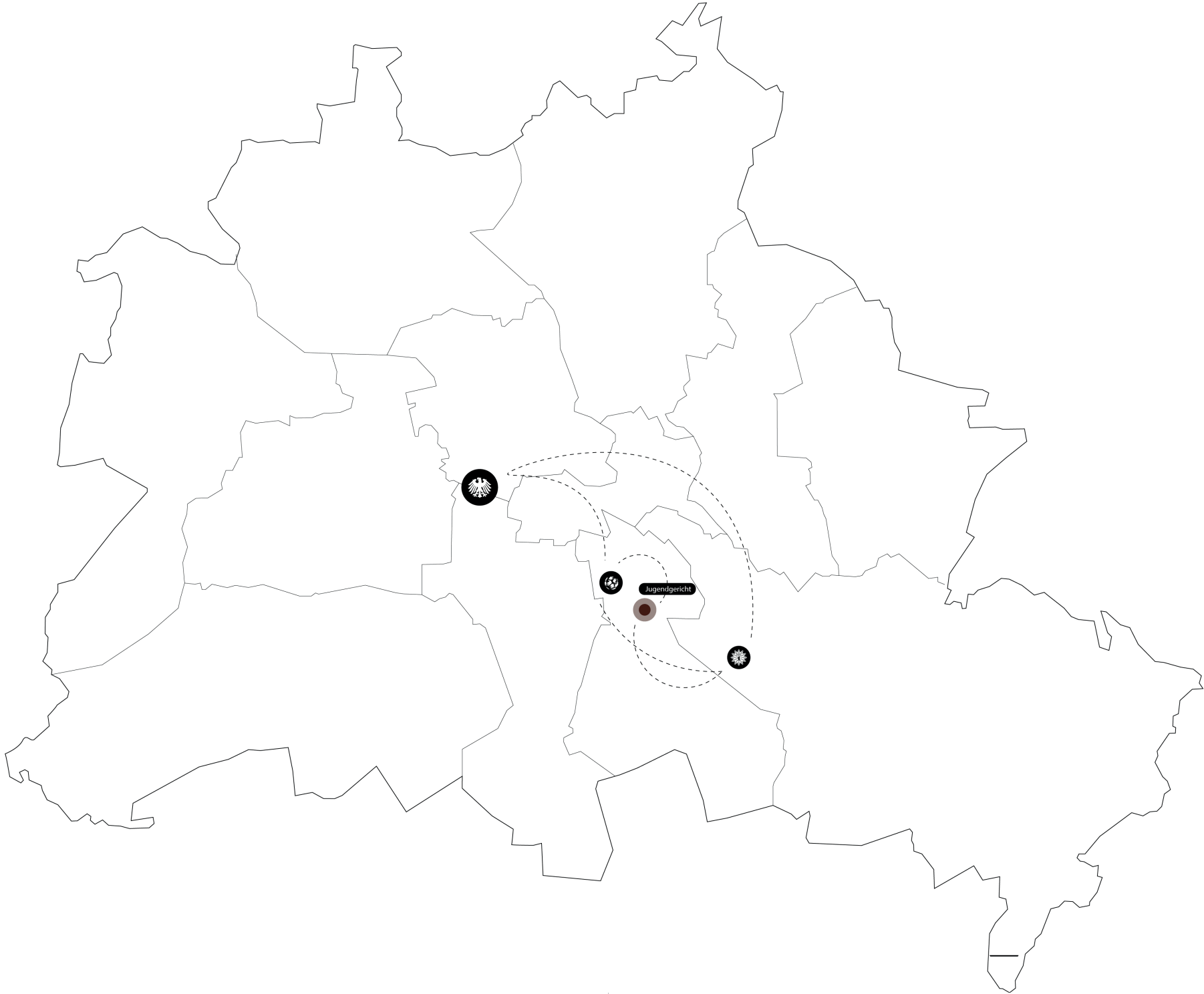


Figure 4.2.2: Future scenario of Berlin with data exchange between involved stakeholders

Additionally, to the involved stakeholders responsible for the courthouse. The main users should not be forgotten. As this building will function for young adults and children. The design should be done through the perspective of a child. Thus, building it on their scale.

Factors in child design should be included, such as building size, light and spatial quality. The size of the building mainly concerns the ceiling height and spatial size. It is recommended to have lower ceilings and smaller rooms for better visual control of their surroundings, see figure 4.2.3 and 4.2.4. The design factor light has an impact on the concentration and mood of children in a space, see figure 4.2.4. Similarly to light, the quality of the space has a similar effect. Whileas linear spaces promote movement, radial spaces concentrate the movement (Hwen, 2019).

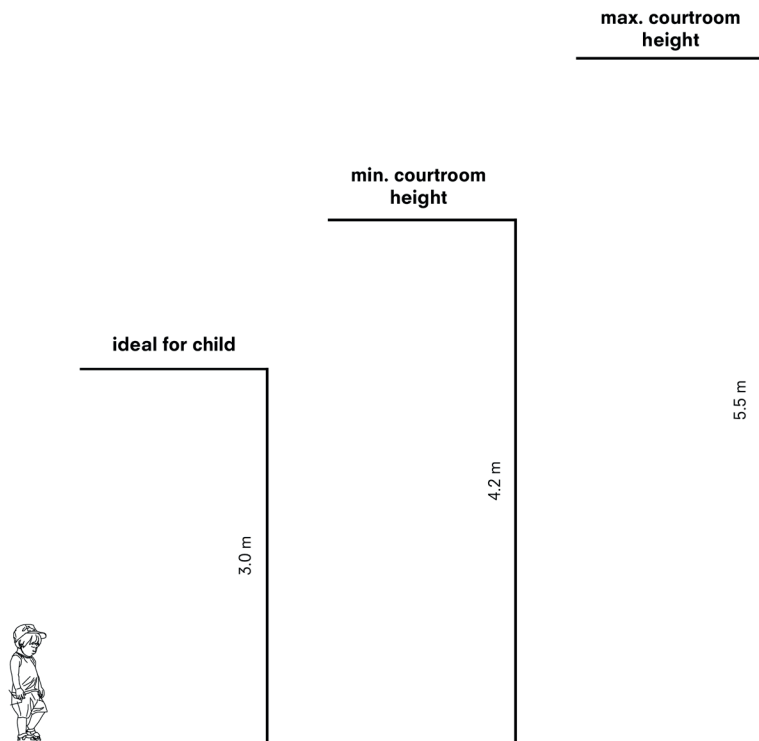


Figure v4.2.3: General courtroom ceiling heights vs. ideal height in comparison to a child

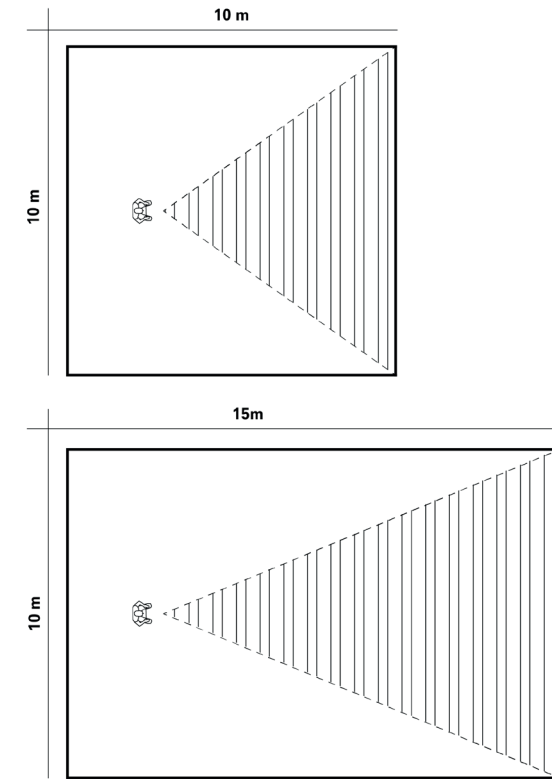


Figure 4.2.3: Courtroom sizes in correspondence to the viewpoint, smaller rooms give better overview of surrounding

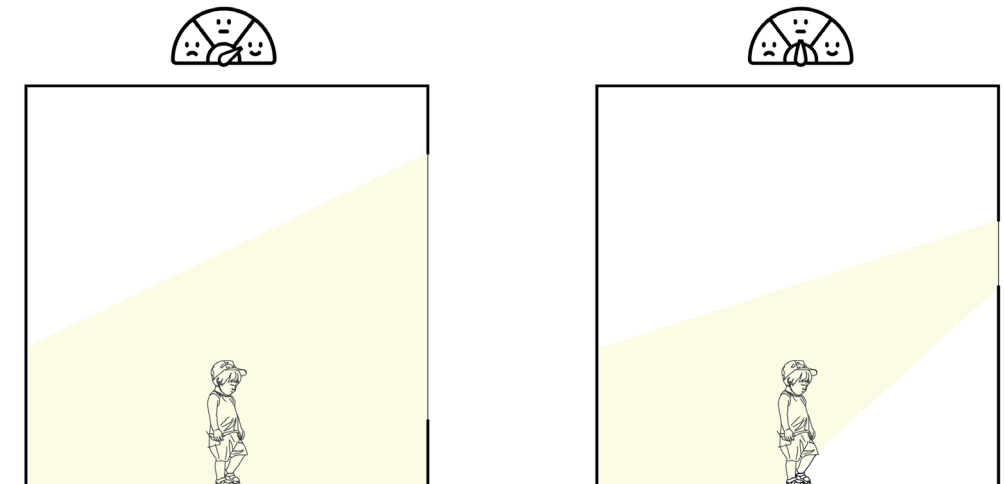


Figure 4.2.4: Mood of child in space with large windows vs. smaller windows

SITE

After the site selection, the plot was analysed to define it. This is achieved through mapping the access, orientation, plot composition (barriers, functions, existing building), green recreation, visual delight and site size, see pages 46 until 53. This plot definition is based on a mass development criteria, ranked from high to medium priority, see figure 4.4. The ranking was developed through the needs and demand of the typology, program and users. For example, the presence of green recreation helps in forming social bonds and lowers stress levels caused by traumas. Accessibility creates safe routing to the courthouse for children and stress-free trips for parents. The plot composition creates awareness of the possibilities on the plot to make the most out of the surroundings and functions on the plot itself.

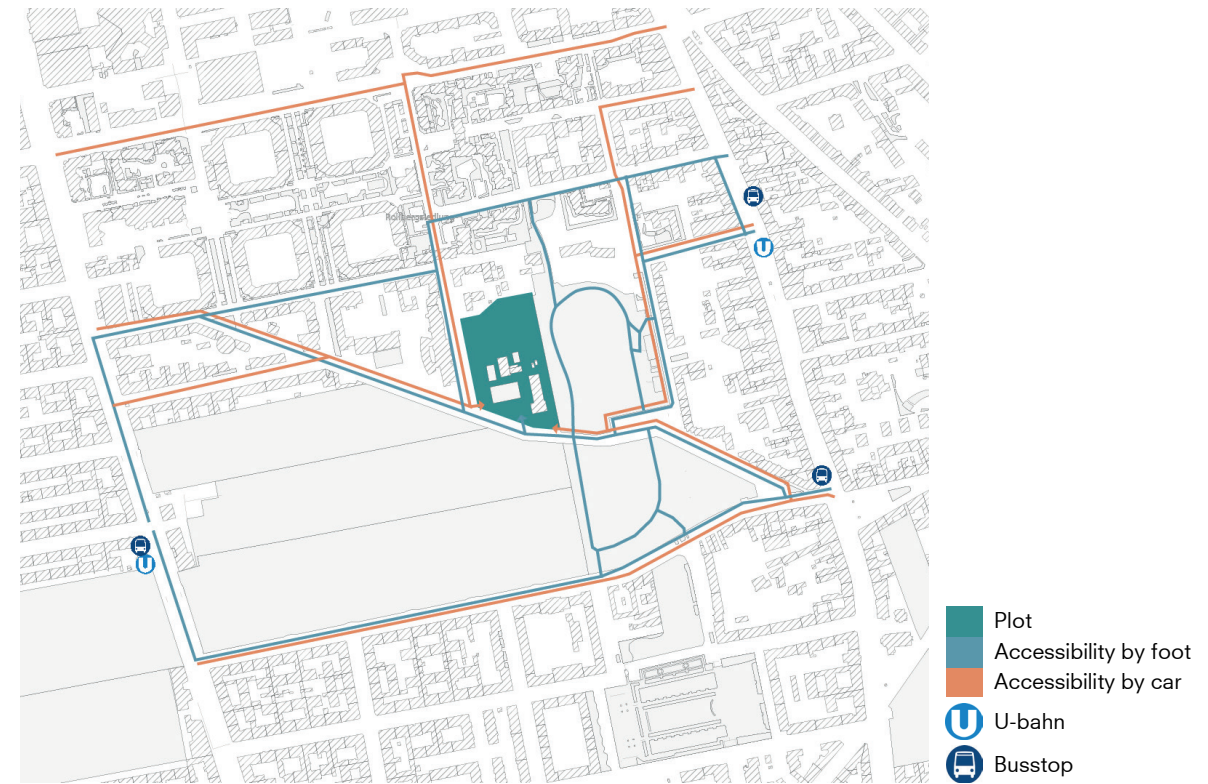
Based on the analysis several masses will be developed in extreme situation to understand what their impact is on the plot and surrounding, see page 51 until 52. Per mass the GFA, height and ground coverage is stated.

MASS DEVELOPMENT CRITERIA

HIGH PRIORITY mass developments	PLOT COMPOSITION	PRESENCE GREEN RECREATION (park, sports field, playground)	ACCESSIBILITY TO PLOT
	MEDIUM PRIORITY mass development	ORIENTATION	BUILDING HEIGHT

DESIGN BRIEF

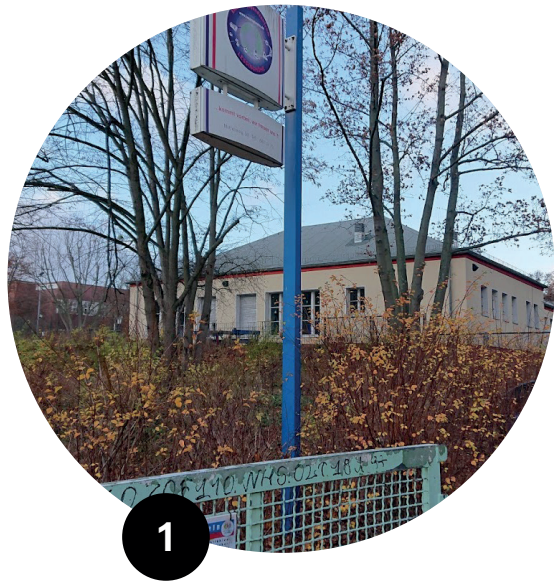
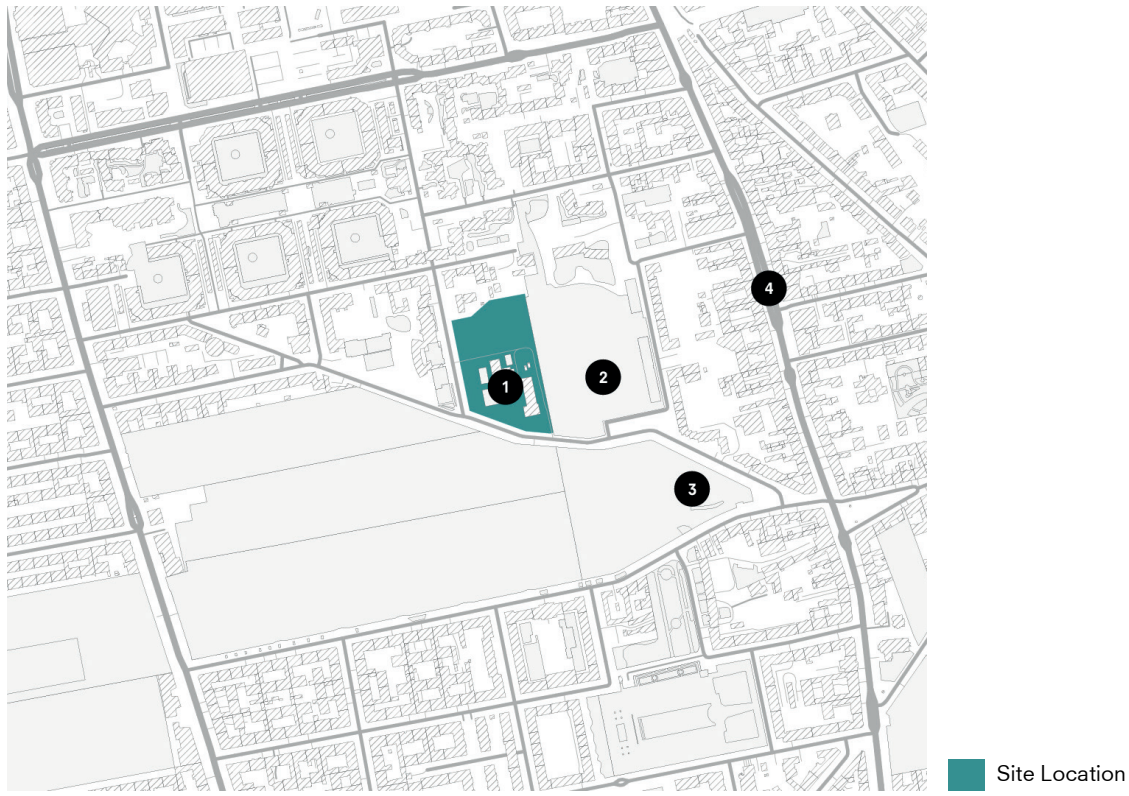
GREEN FUNCTION AND FLOW



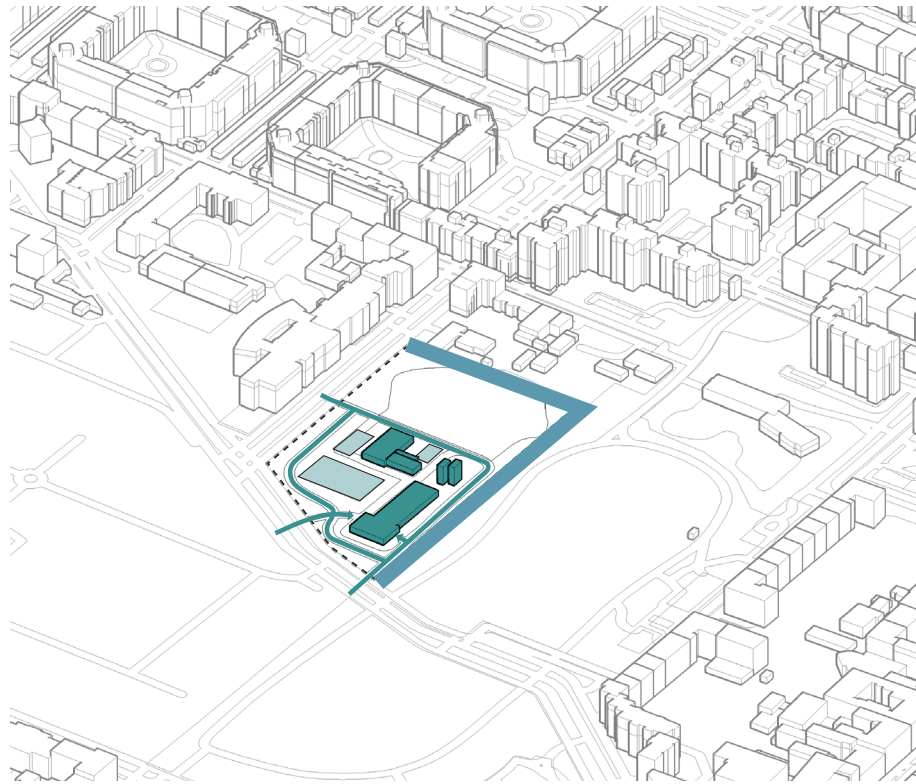
GREEN RECREATION



VISUAL DELIGHT

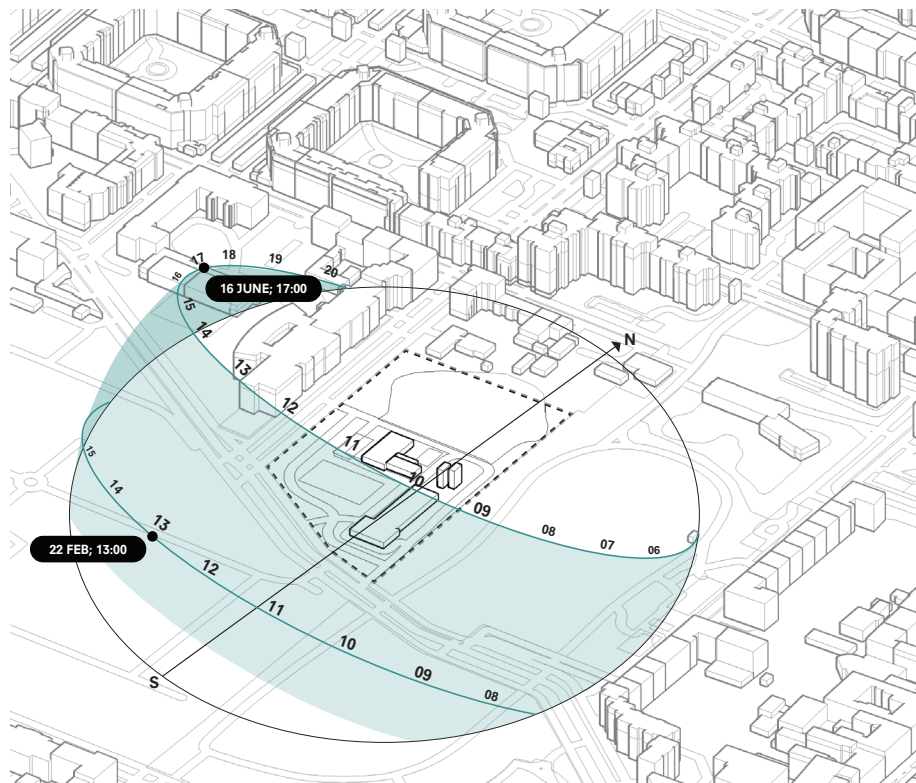


PLOT COMPOSITION



- - - Site Location
- Existing Building
- Sports Field
- Physical Barrier

ORIENTATION



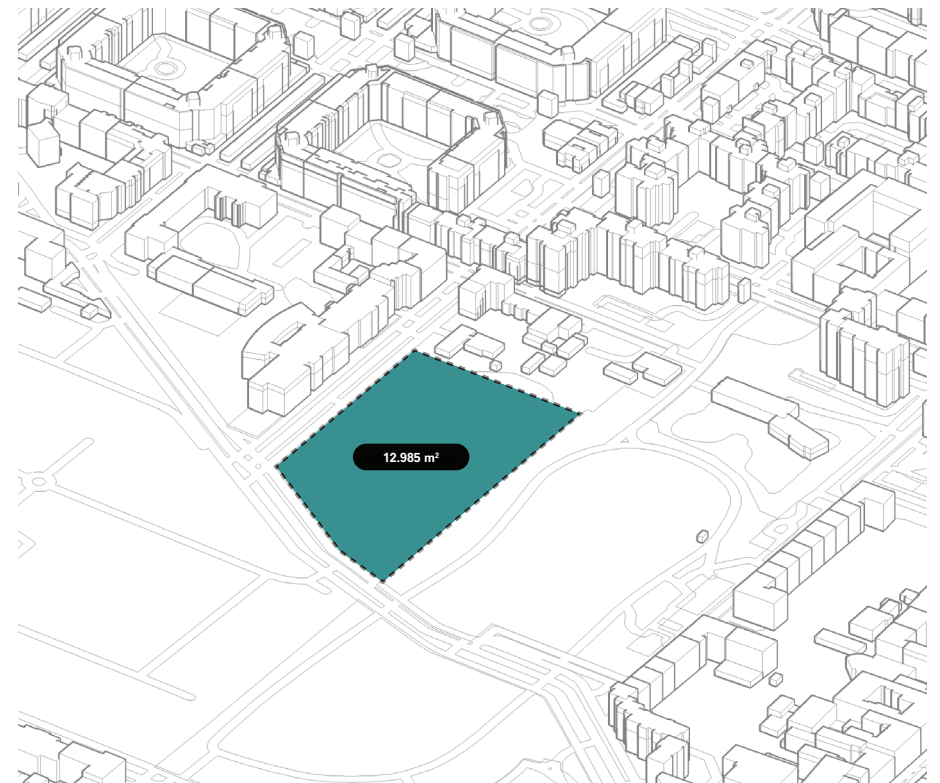
- - - Site Location
- Sunpath

BUILDING HEIGHT



- - - Site Location
- < = 6m
- > 6m - 12m
- > 12m - 22m
- > 22m - 40m
- > 40m - 50m

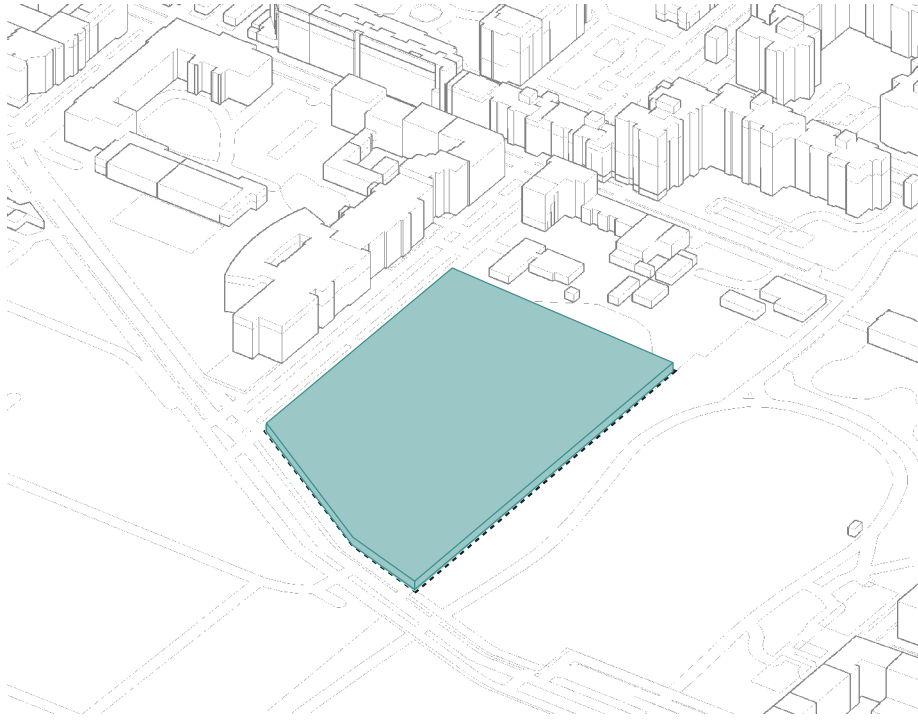
SITE AREA



- - - Site Location
- Site Area

MASS ANALYSIS

TOTAL GROUND COVERAGE

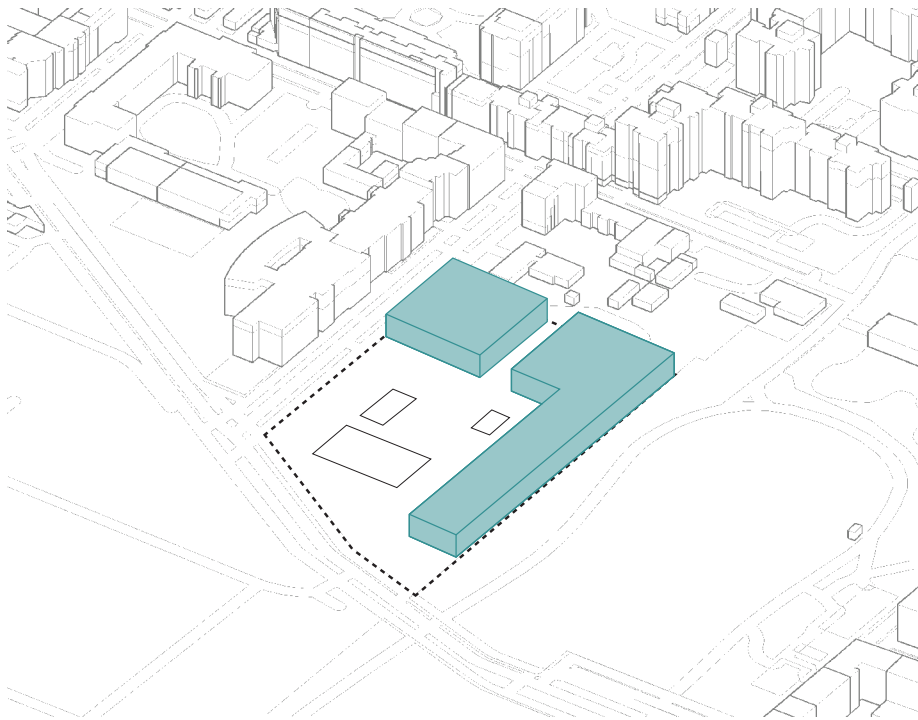


FAR:
100%

GFA:
12.985 m²

Height:
3m (1 floor)

ORIENTATION



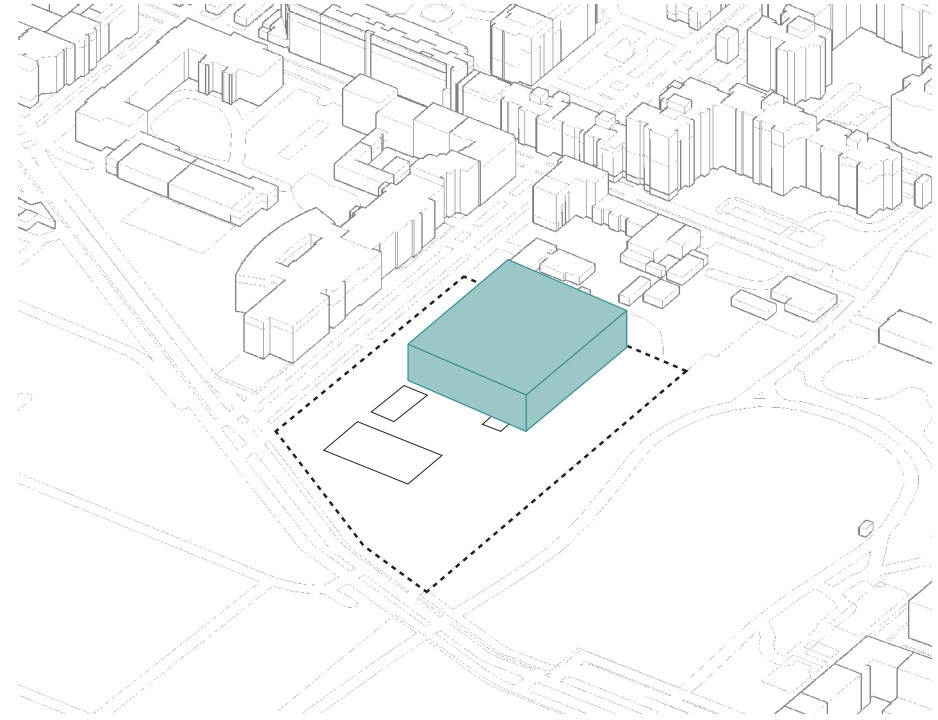
FAR:
39%

GFA:
15.000 m²

Height:
9m (3 floors)

DESIGN BRIEF

MAXIMUM HEIGHT

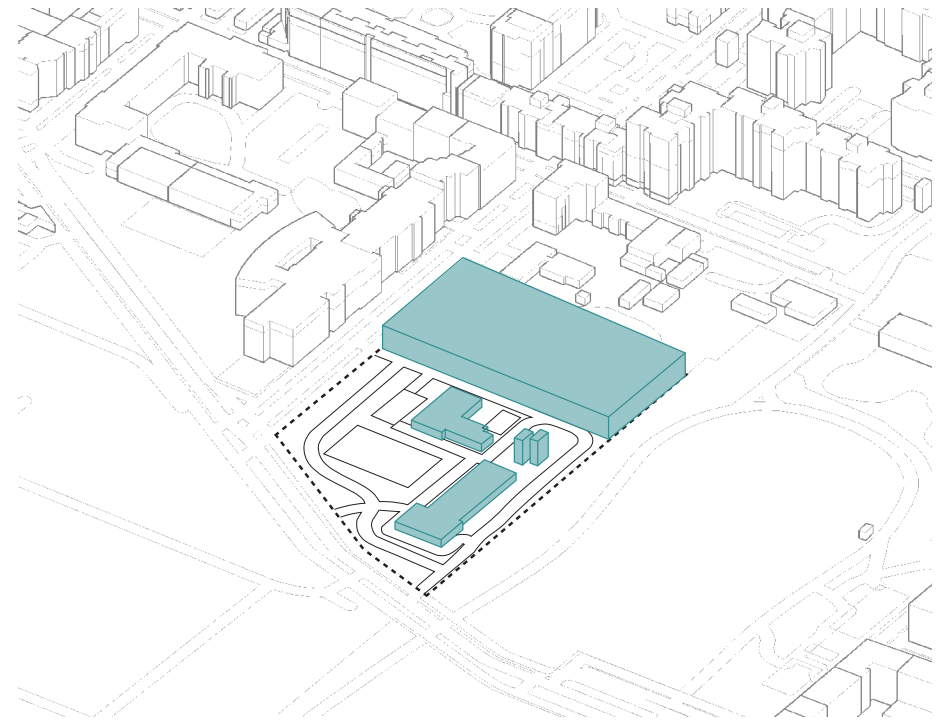


FAR:
23%

GFA:
15.000 m²

Height:
15m (5 floors)

PLOT COMPOSITION WITH EXISTING BUILDING



FAR:
43%

GFA:
14.640 m²

Height:
9m (3 floors)

DESIGN

05

CONCEPT

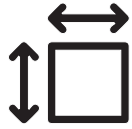
Following the design brief a 3x3 mass analysis is conducted per category(client, program, site). Each category has their own three criteria which have been collected through the intial research, see figure 5.1.1. By focusing on a criteria per category extreme situations can be realized with the mass. From the developed concept masses one is selected for further development, see figure 5.1.2.

The selected concept mass is: Core Functionality, see figure 5.1.3. The courthouse should not loose its essence due to the additional programs. Besides, it should exceed a certain authority. This was achieved by the plinth and seperate building block on top for the couthouse. However, this concept will have its shortcomings as we didn't take into account other criteria. Hence,

a criteria map is made, see figure 5.1.4. As a consequence of the criteria, the mass has evolved, see figure 5.1.5. The chosen concept was lacking in terms of functionality and it did not adhere to the scale of a child. Thus, the plinth was lowered and a second building mass came on top. Besides, the intial concept used up all of the plot, the evolved concept makes room for outdoors activities which was a demand in the program. In figure 5.1.6, the vision for the neighborhood can be seen.

DESIGN

CLIENT



Size



Natural Light

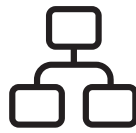


Quality of Space

PROGRAM



Core Functionality



Relationship



Public vs. Private

SITE



Greenery



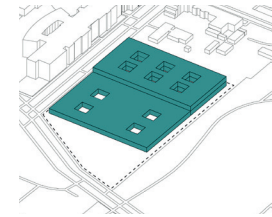
Accessibility



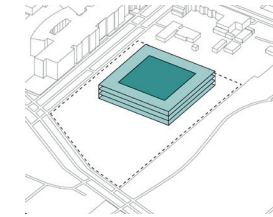
Landmark

Figure 5.1.1: Concept mass criteria per client, program, site

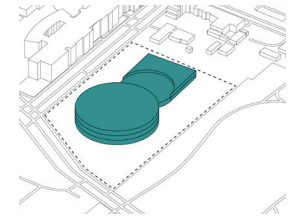
CLIENT



Size

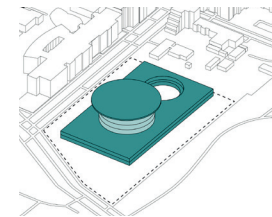


Natural Light

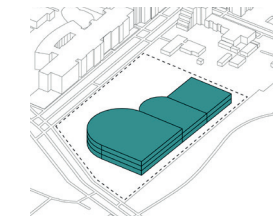


Quality of Space

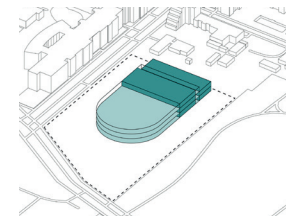
PROGRAM



Core Functionality

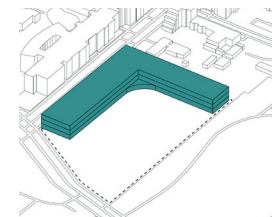


Relationship

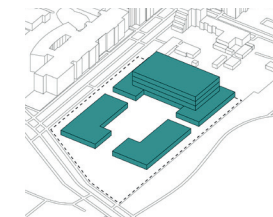


Public vs. Private

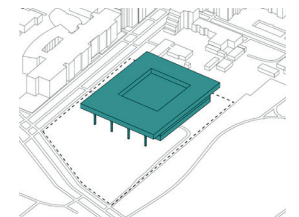
SITE



Greenery



Accessibility



Landmark

Figure 5.1.2: Concept mass per criteria (bold is selected)

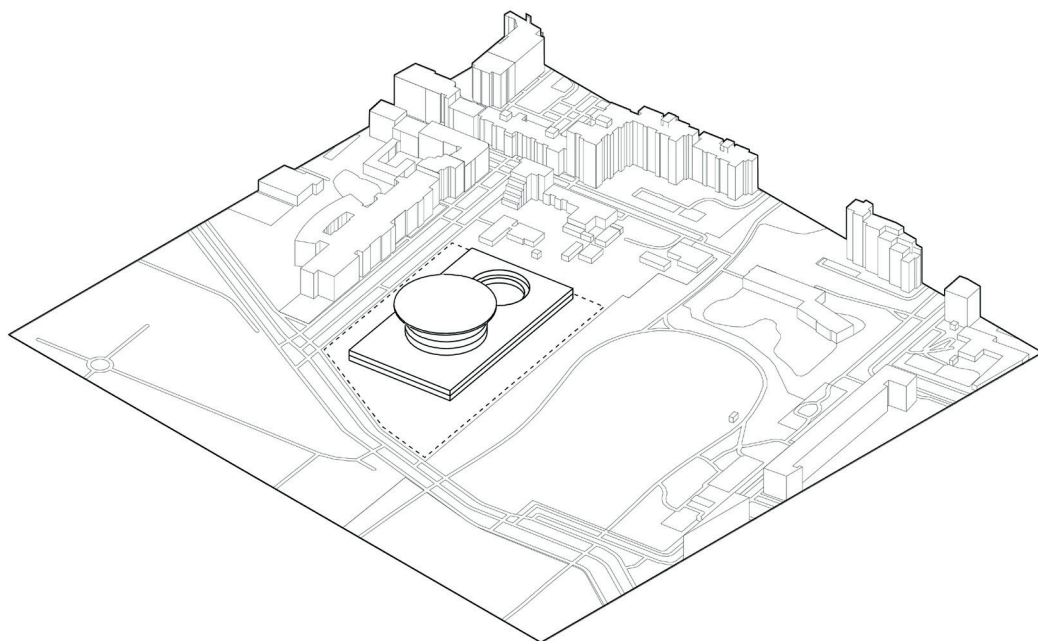


Figure 5.1.3: Chosen oncept mass on plot

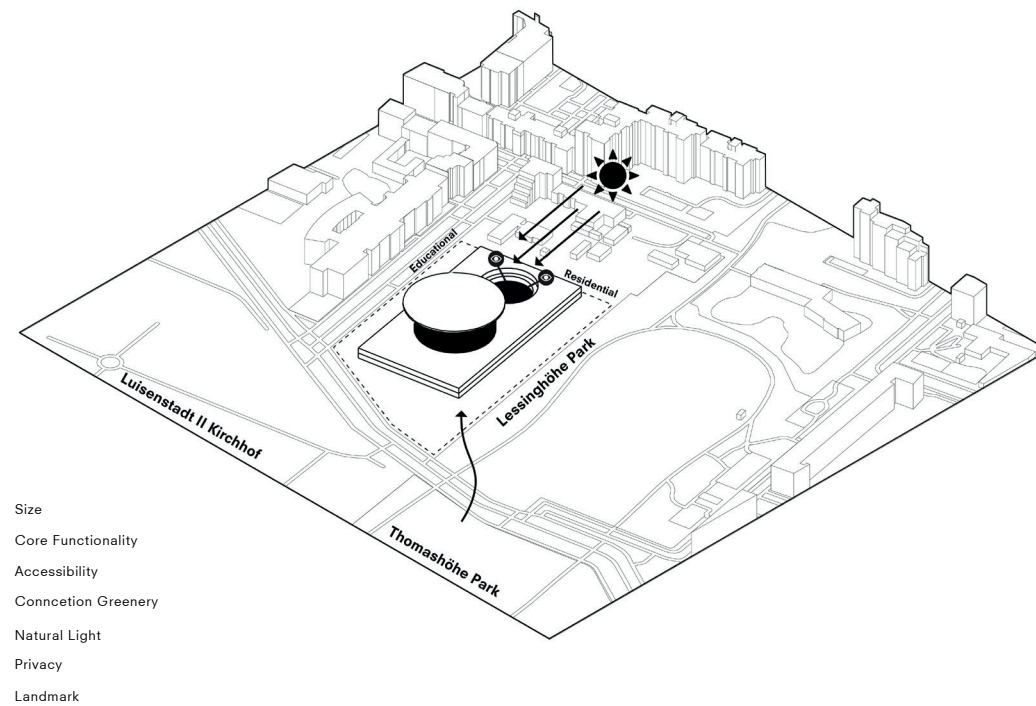


Figure 5.1.4: Concept criteria (black = applied, white = missing, grey=inbetween)

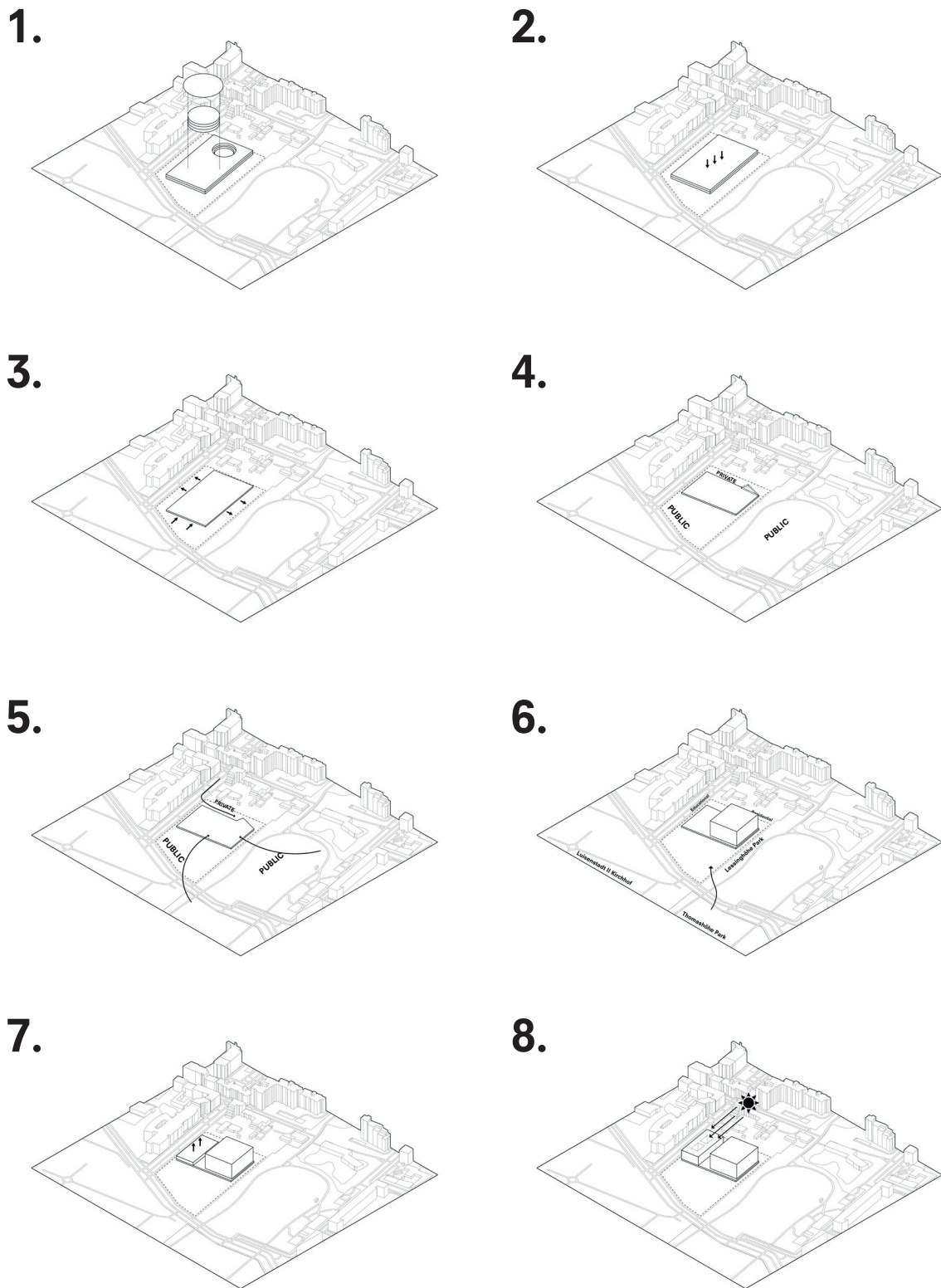


Figure 5.1.5: Concept morphology

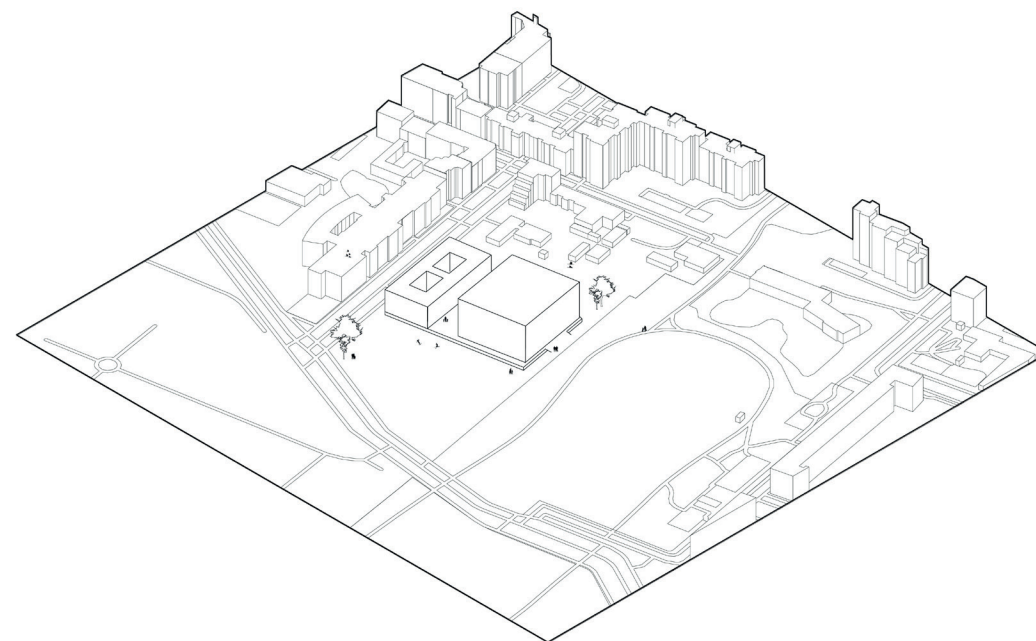


Figure 5.1.6: Vision for the neighborhood

The building consists of two blocks on a shared plinth which is partially underground, see figure 5.2.1. For the structure of the building a grid pattern of 5x5 meters is utilized. The cores have been placed symmetrically for balance. The materialized used for the construction are concrete, CLT and GLT. Concrete will be used for the shared plinth and the first level of the building blocks, whileas CLT is used for the upper floors and walls. GLT is commonly used for the columns in the building as they are aestheically pleasing. In figure 5.2.3 and 5.2.4. the structural model with material type are visualized.

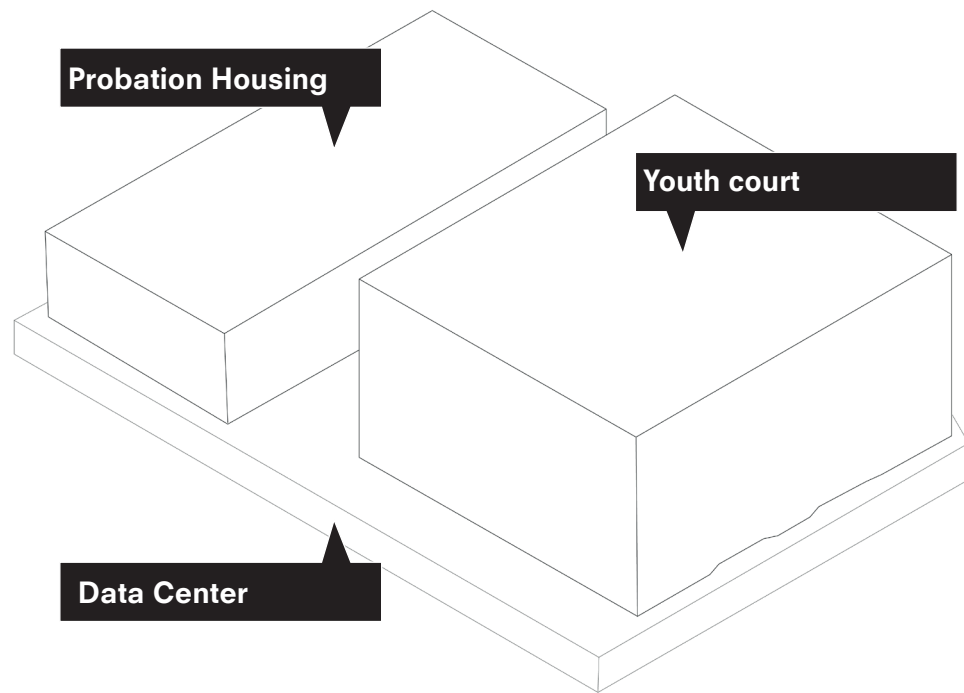


Figure 5.2.1: Building mass

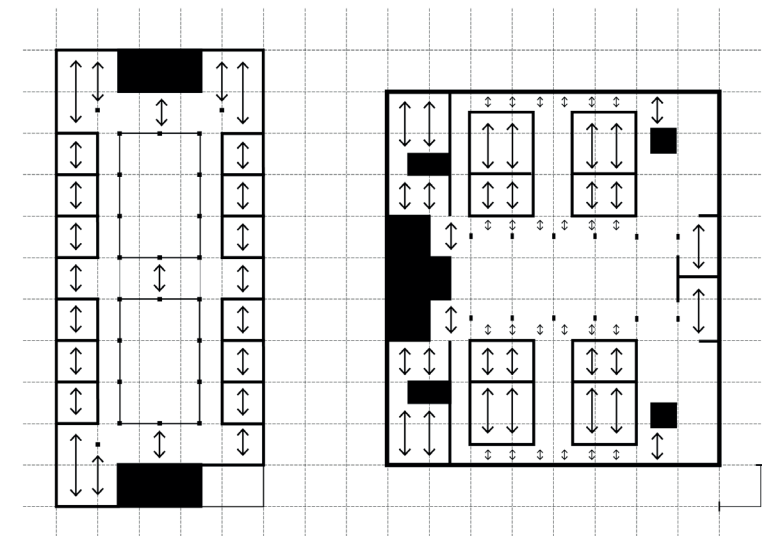
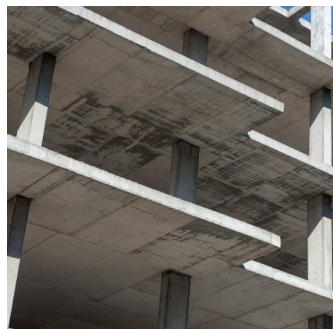
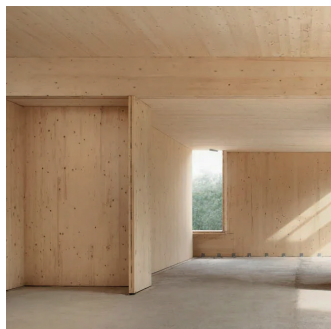


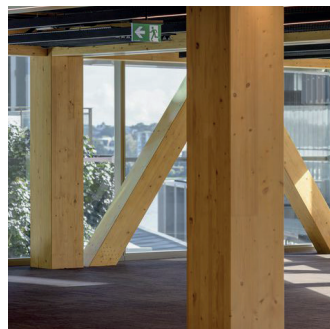
Figure 5.2.2: Building grid, core and span



CONCRETE



CLT



GLT

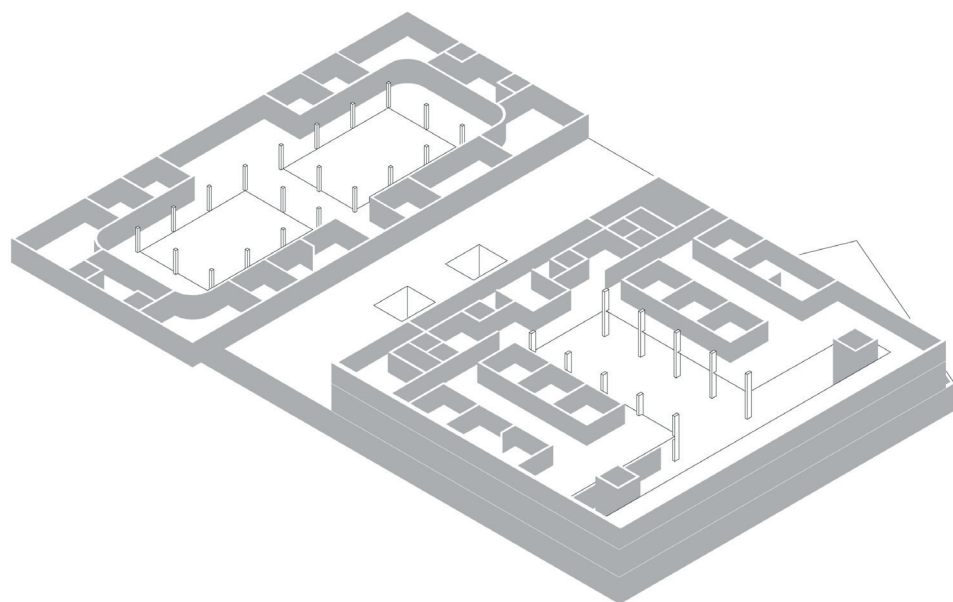


Figure 5.2.3: Structural model plinth and first level

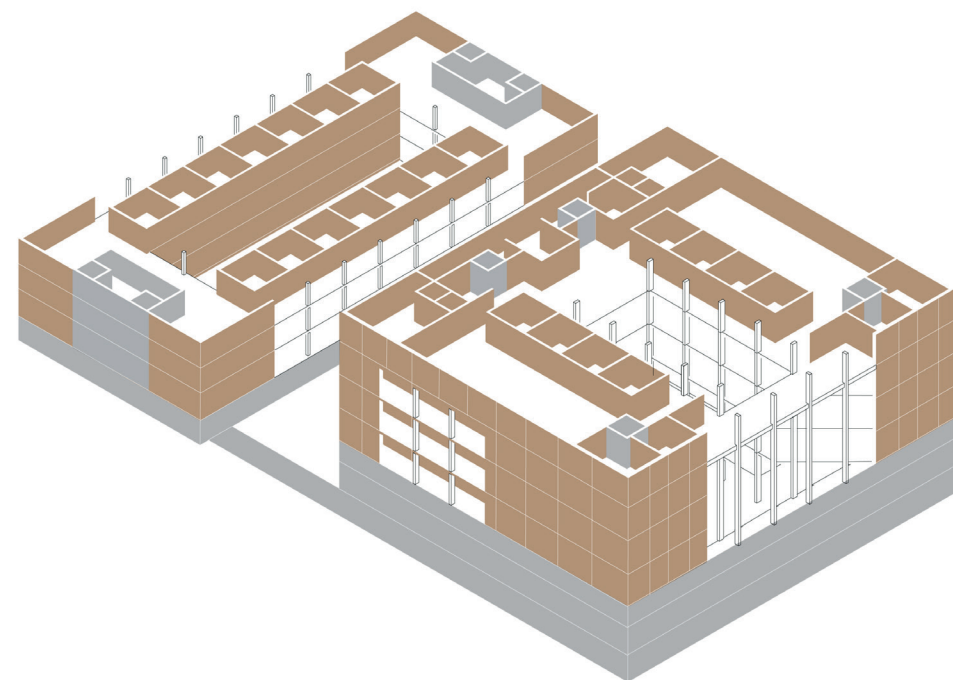
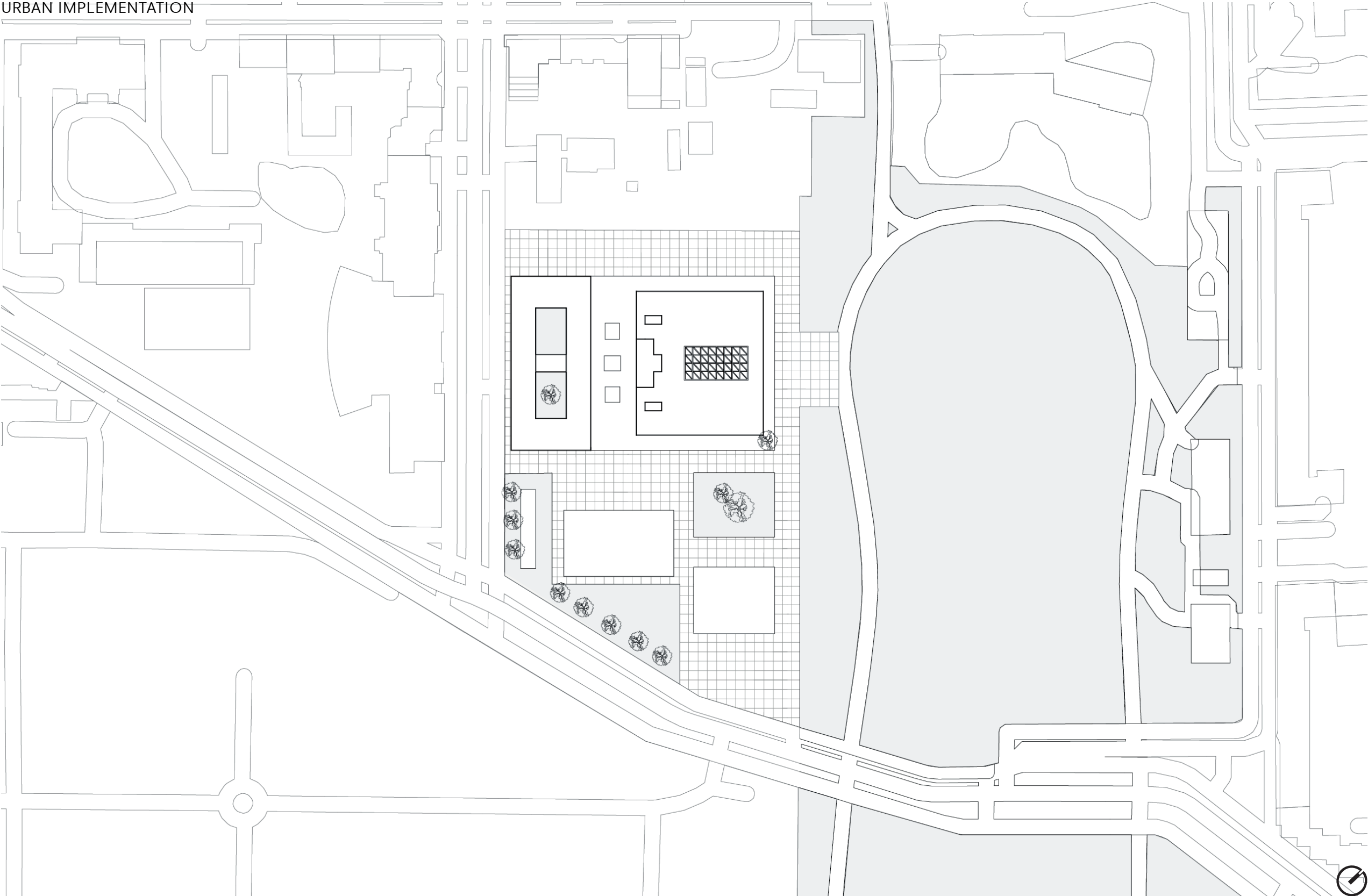
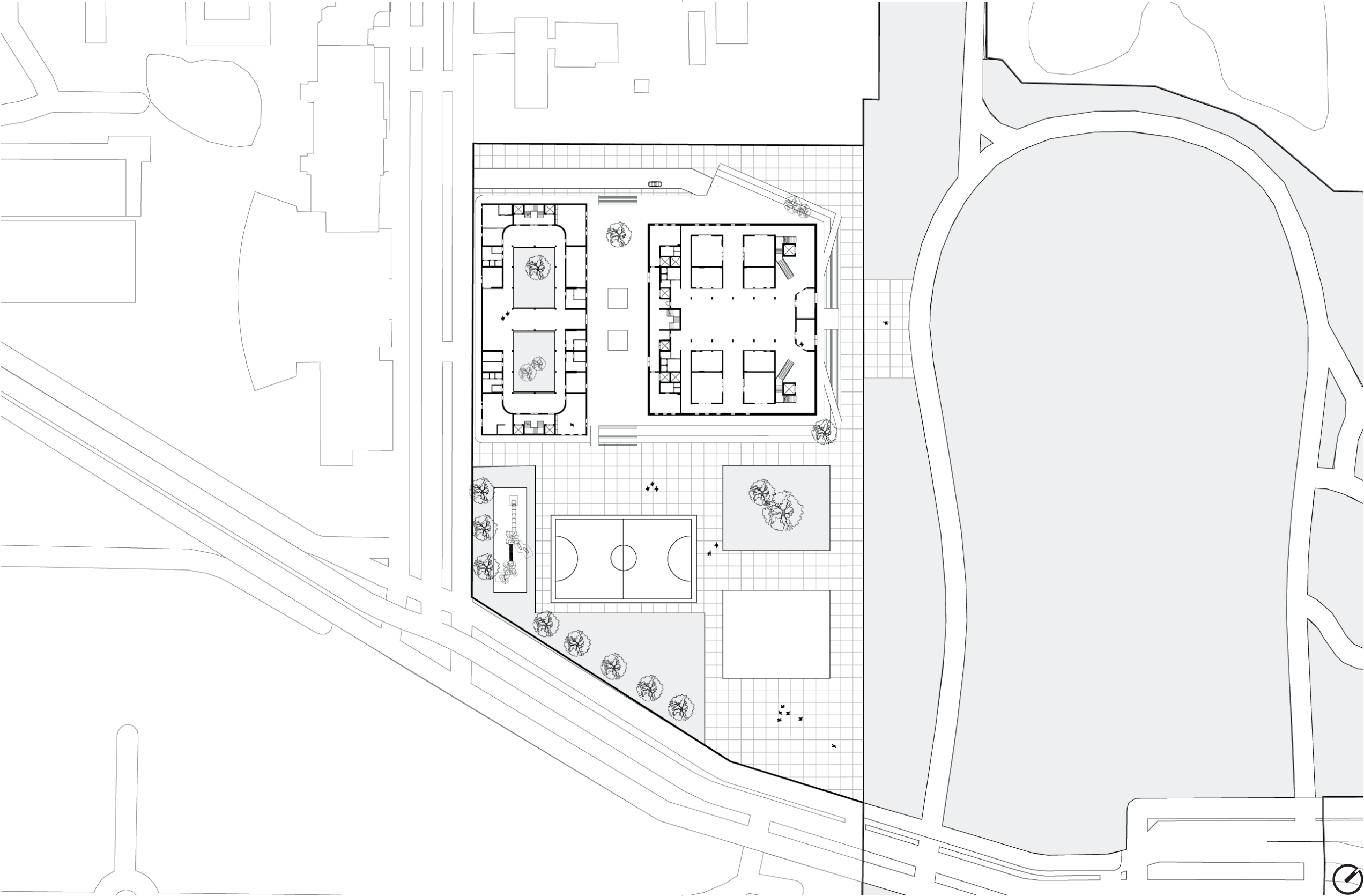
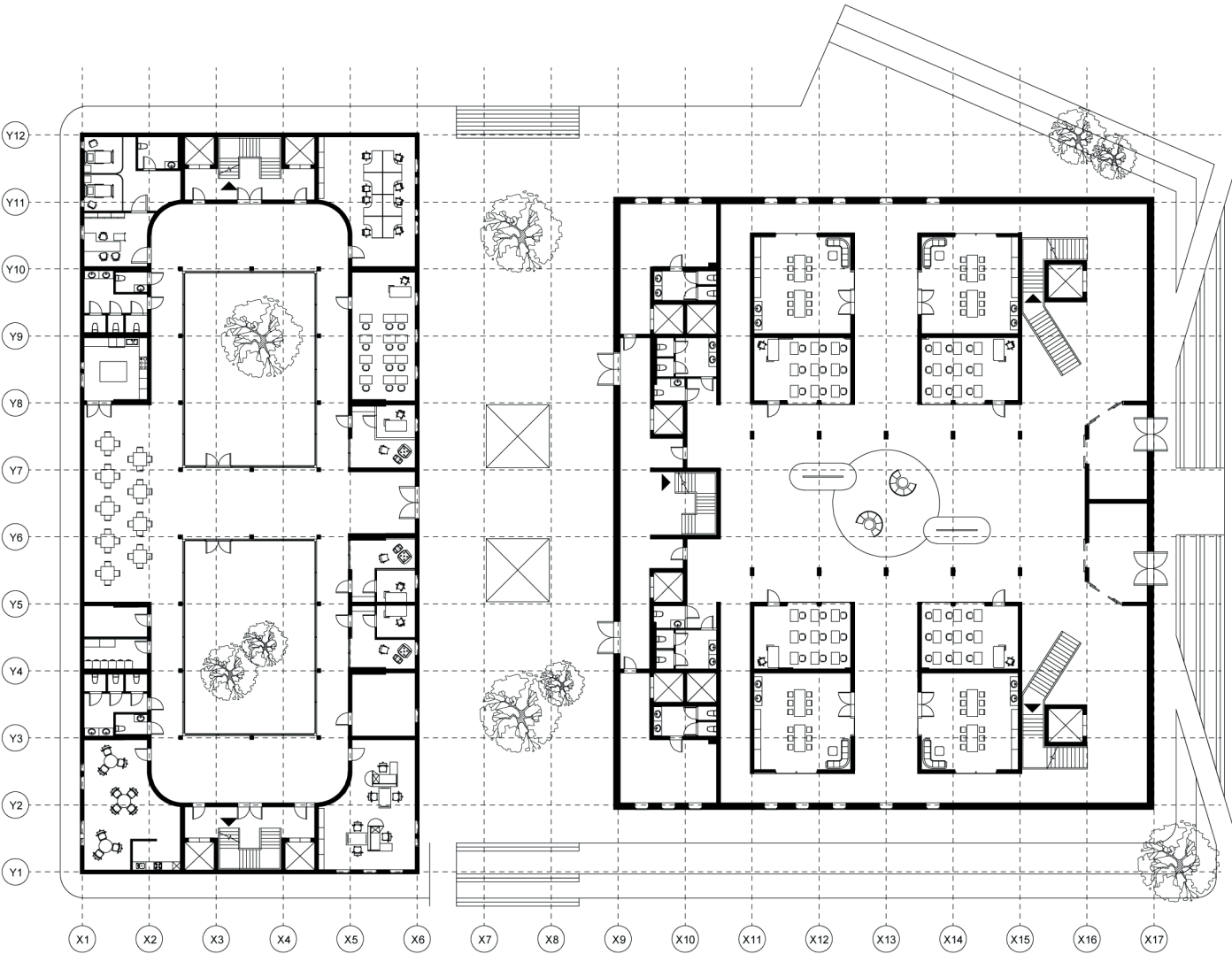


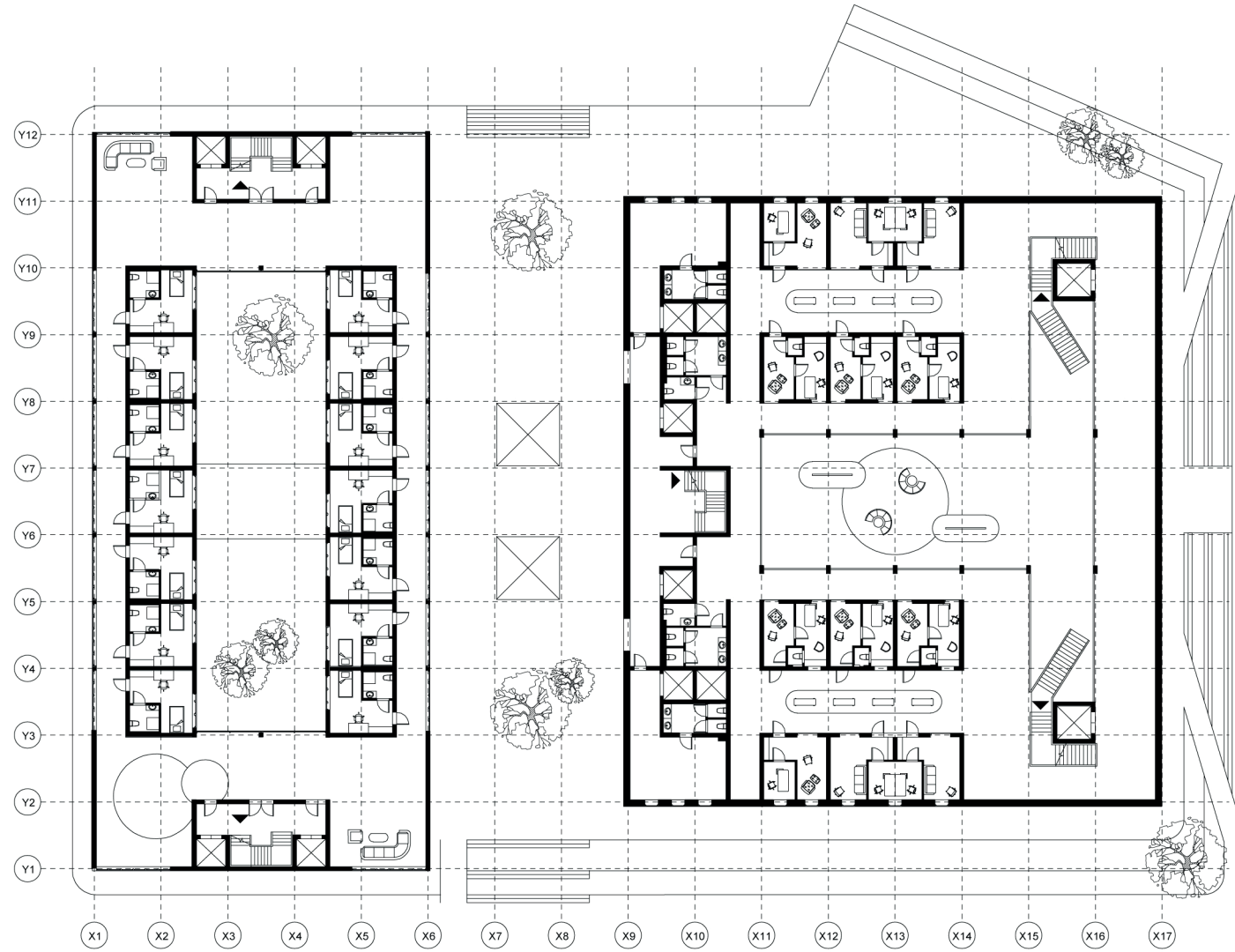
Figure 5.2.4: structural model with CLT walls

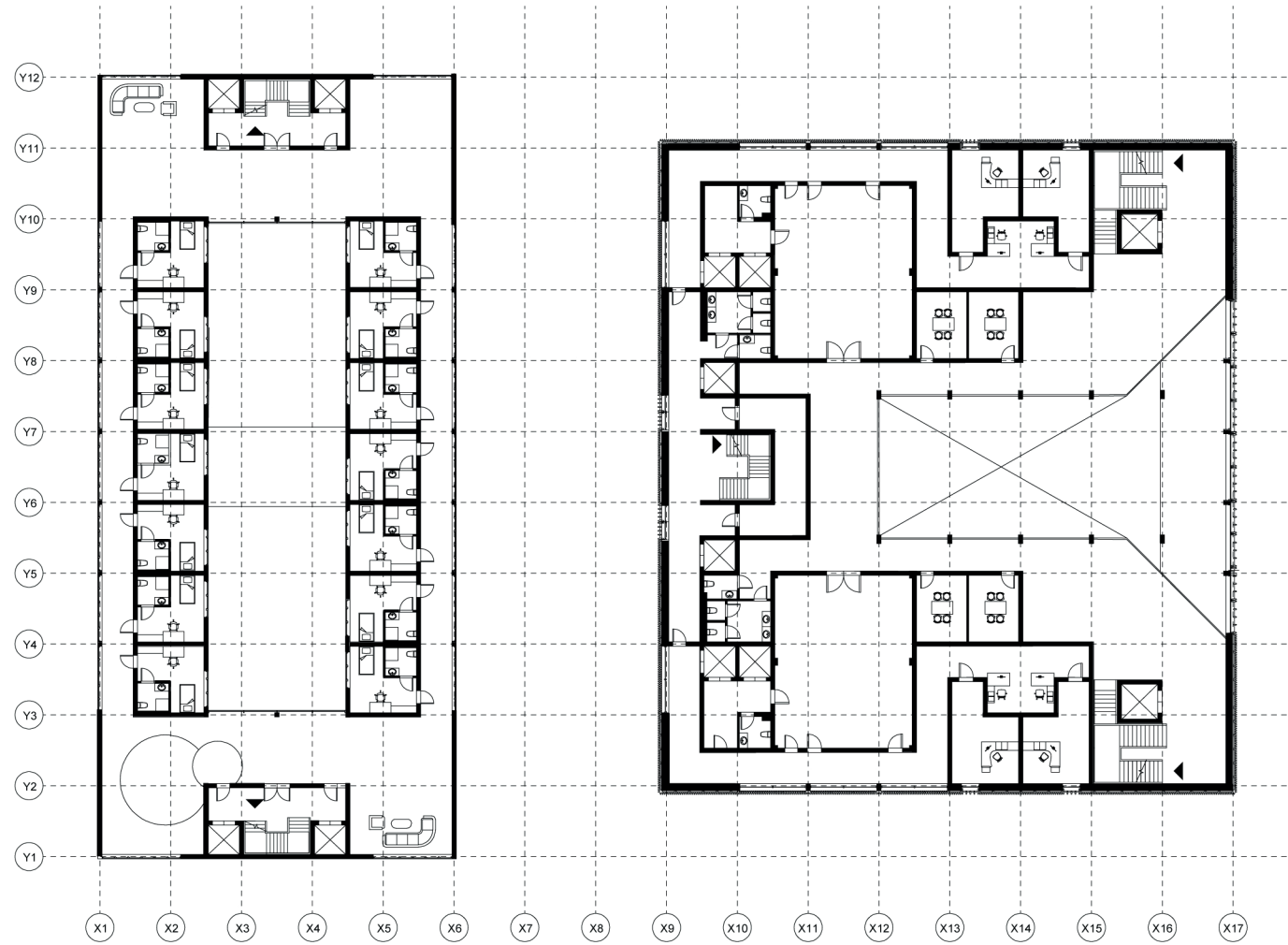
URBAN IMPLEMENTATION

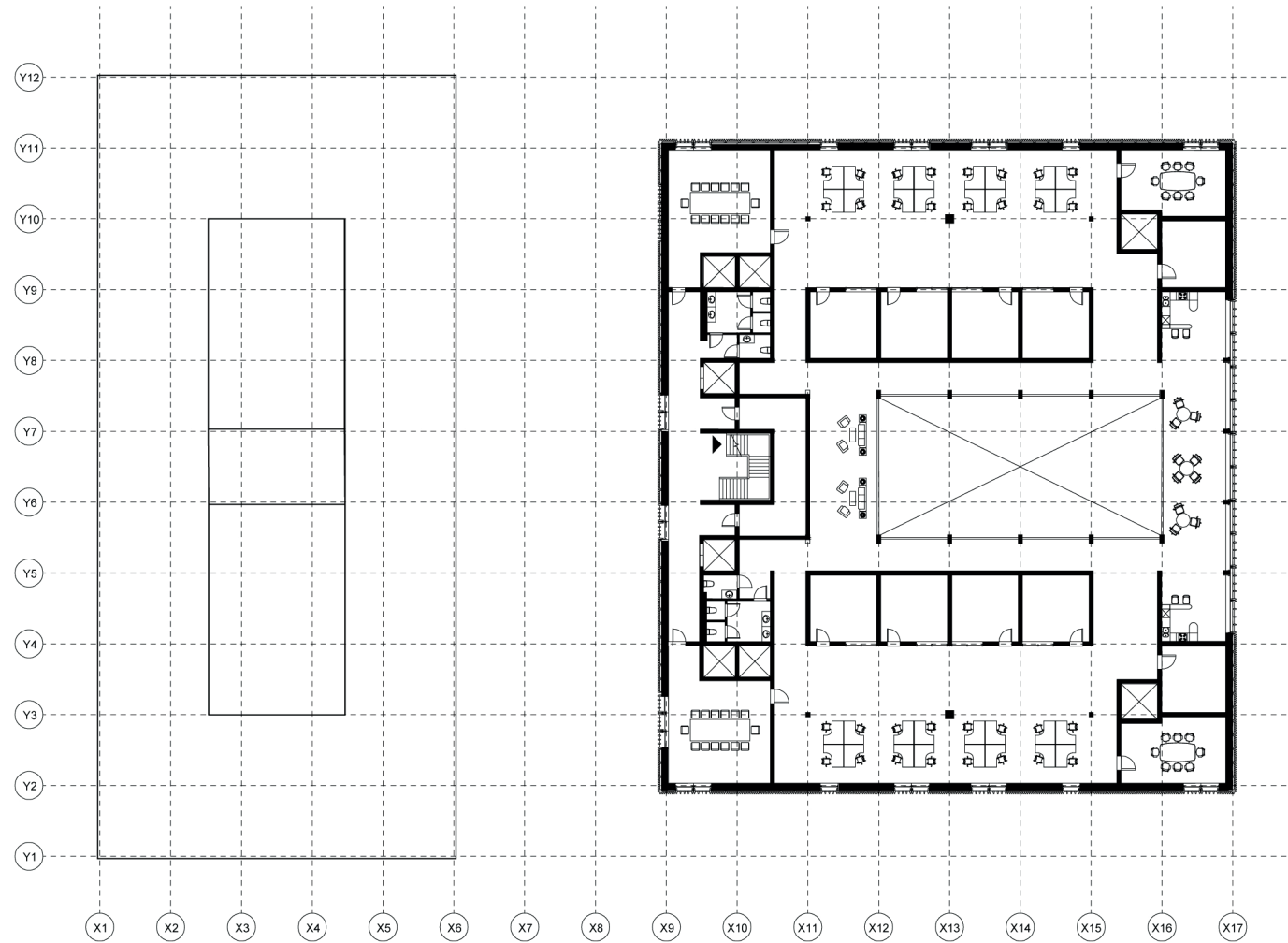


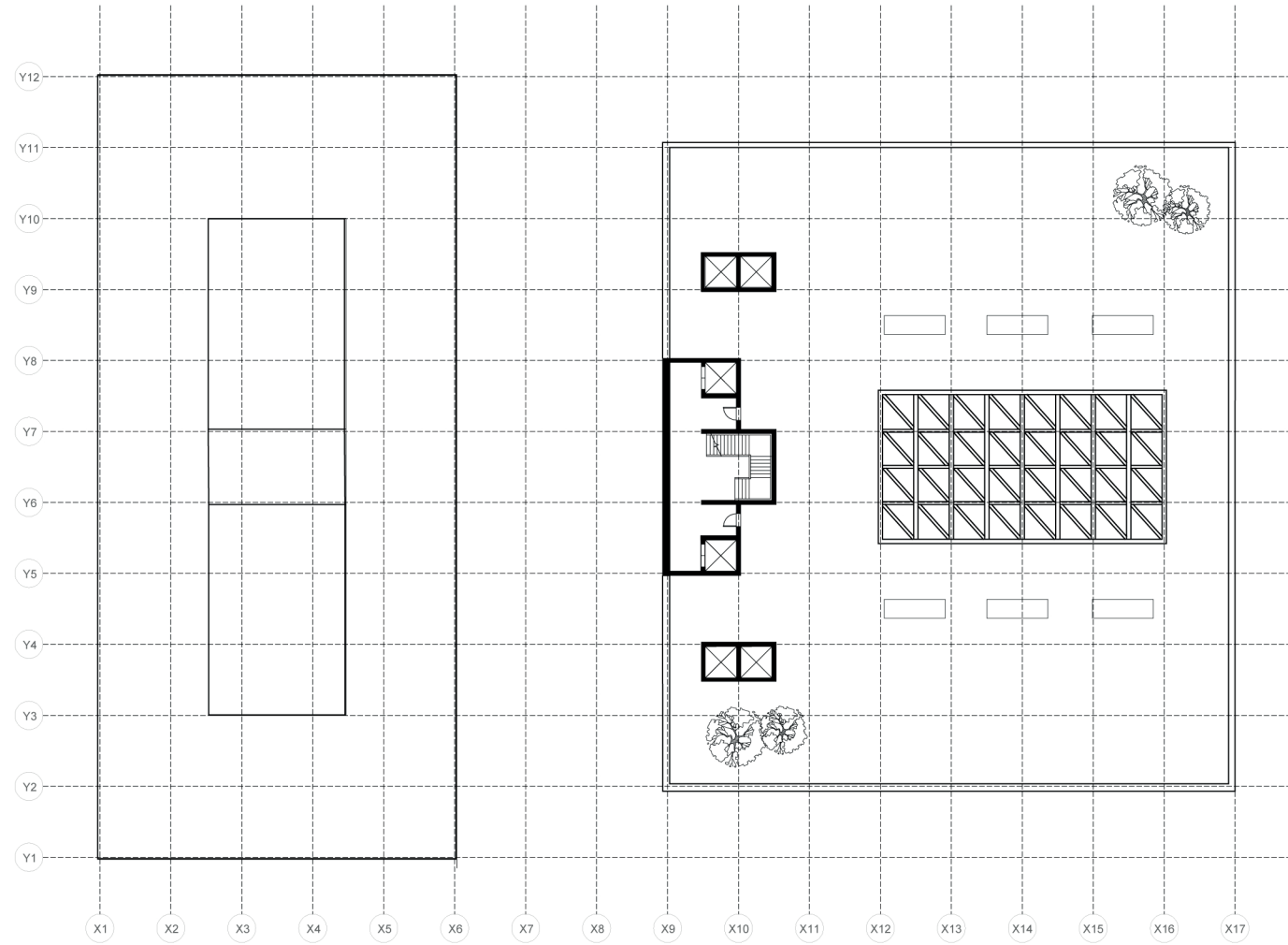


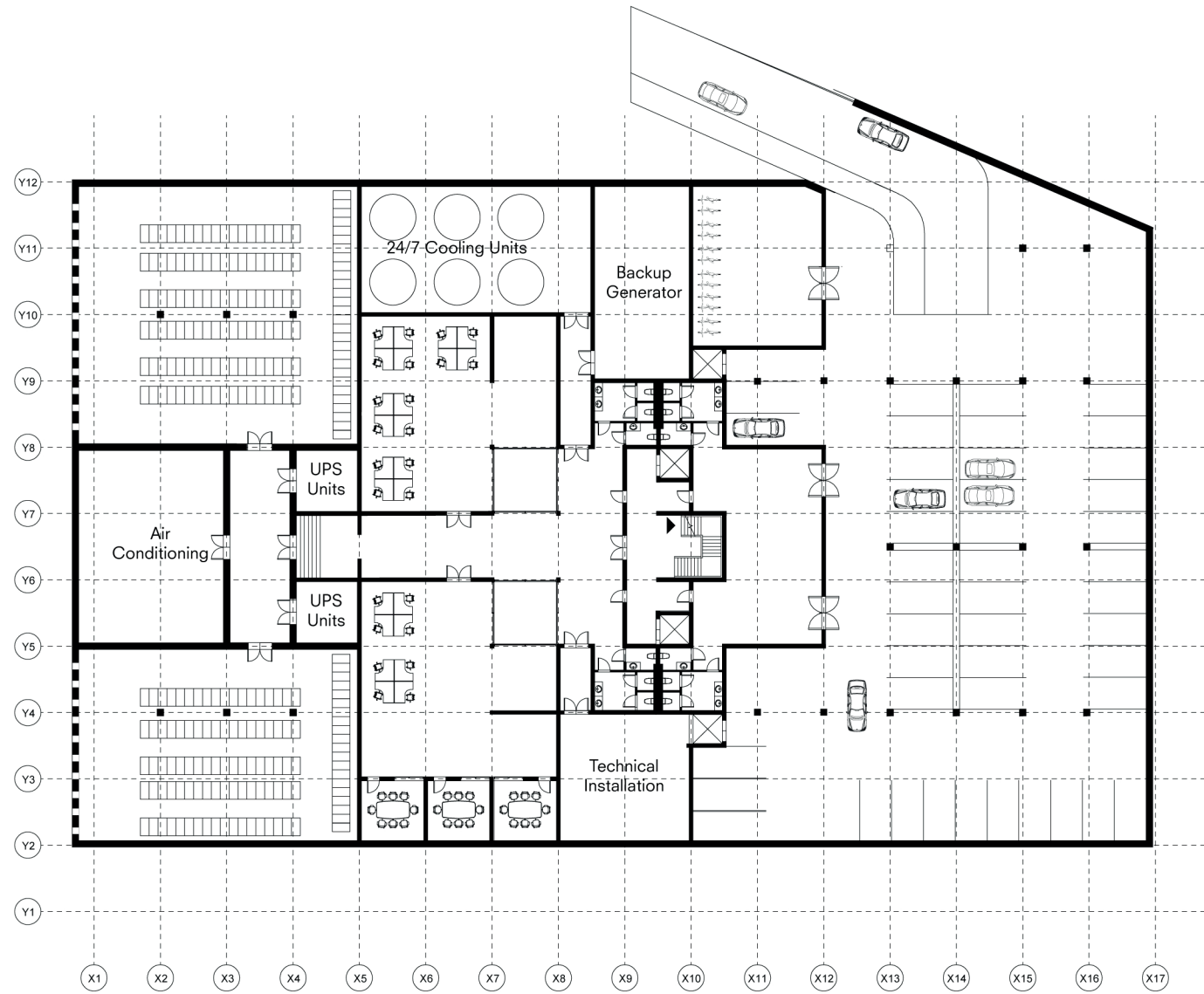














CONCRETE PANELS

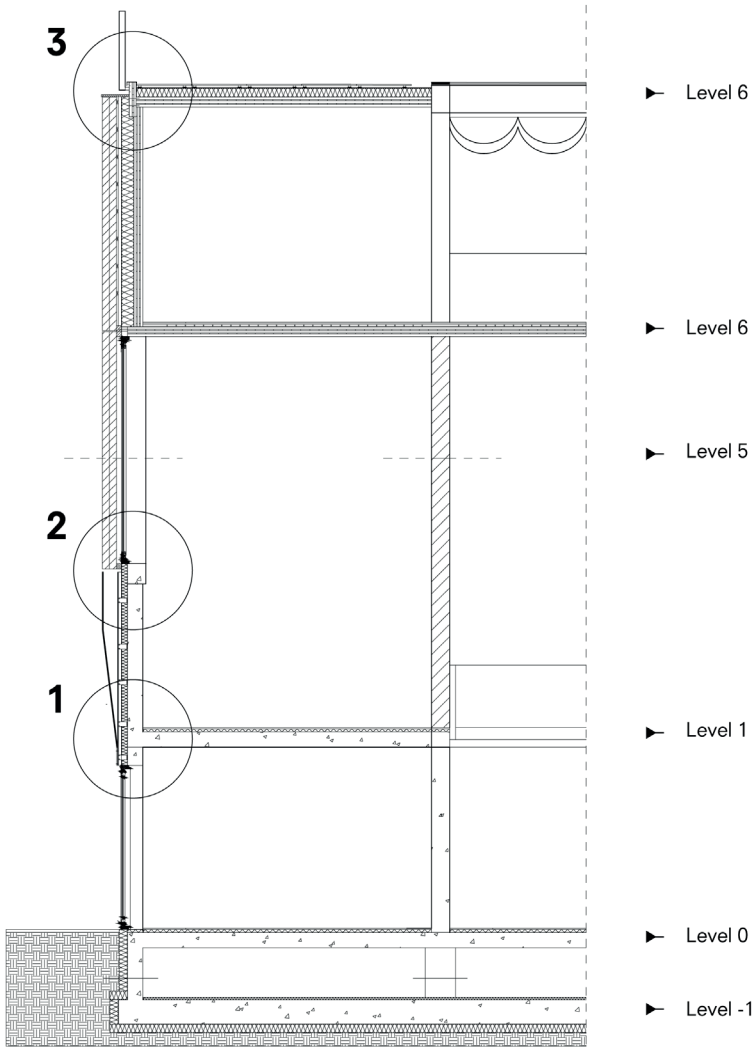
- strong and heavy impression



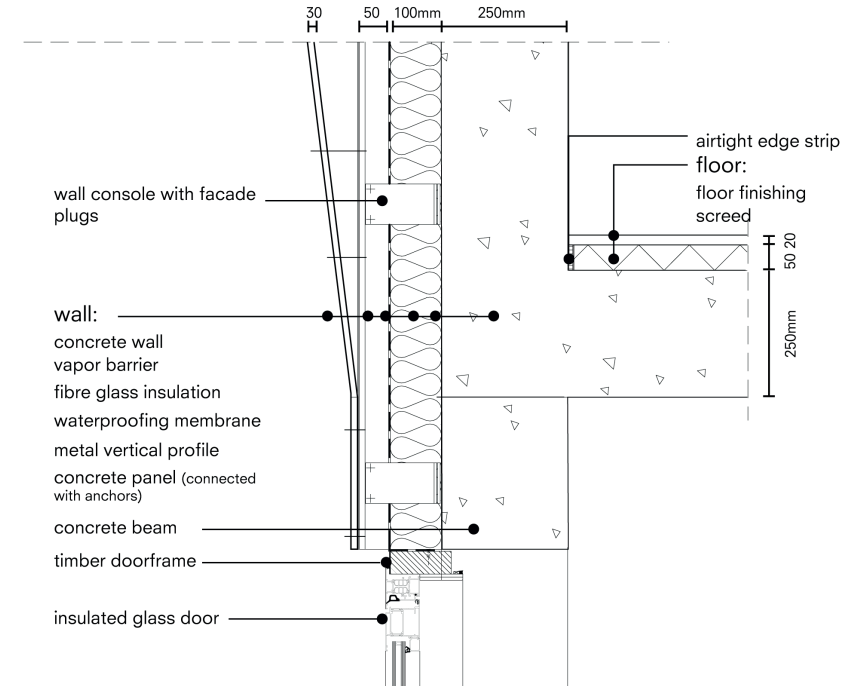
TIMBER SLATS

- warm and light impression
- privacy

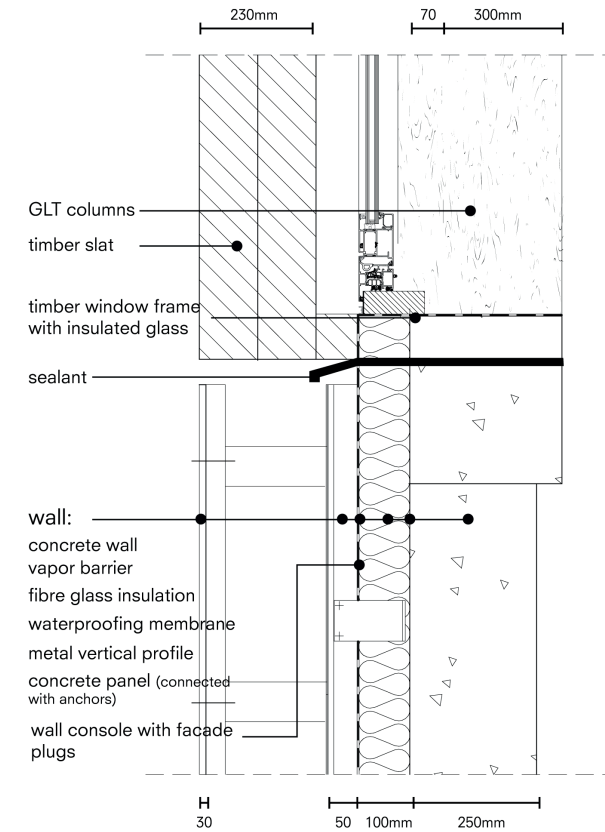
The building envelope of the courthouse has four slat types related to the zoning within the building. The more apart the slats are the more public a program behind that facade is, see figure 5.3.1.



1.



2.



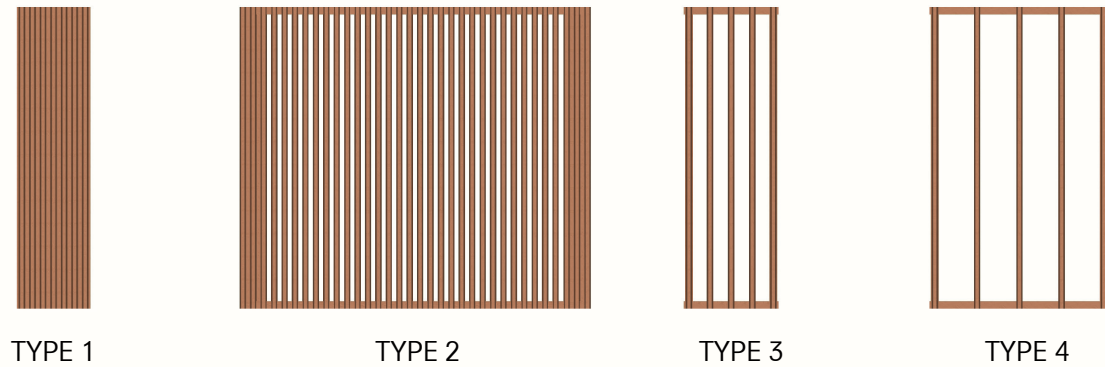
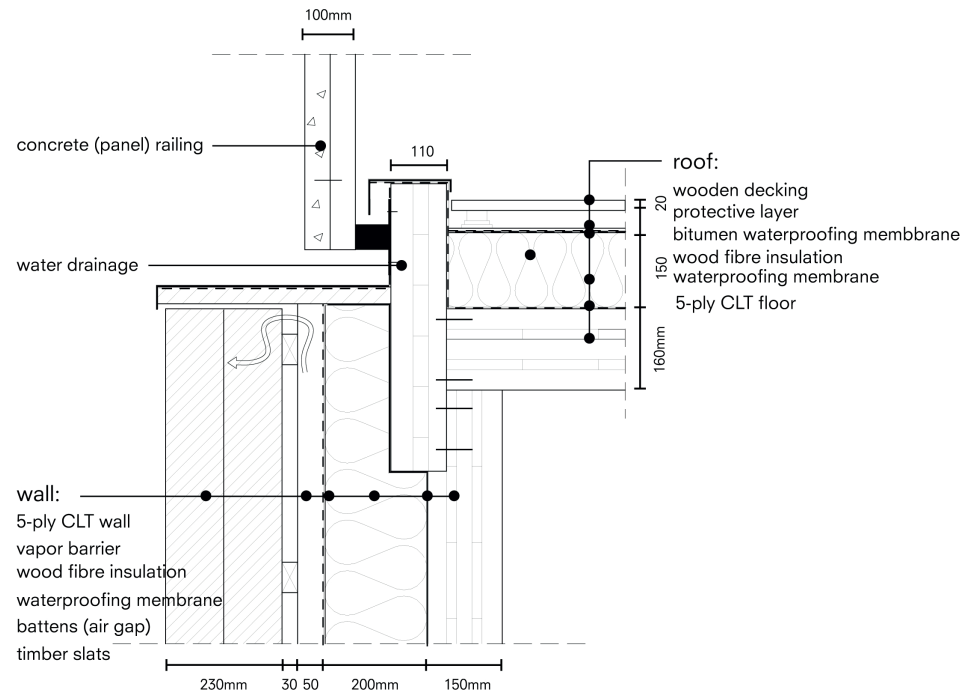
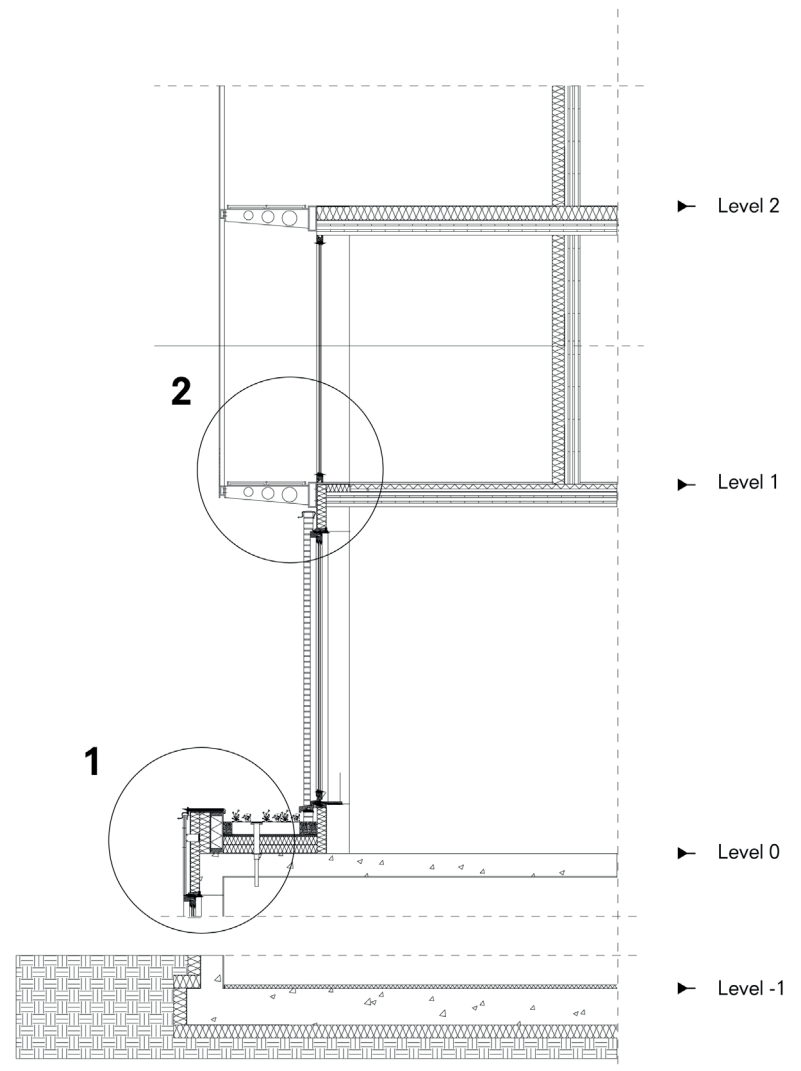


Figure 5.3.1: Timber slat types (private(left) to public(right))

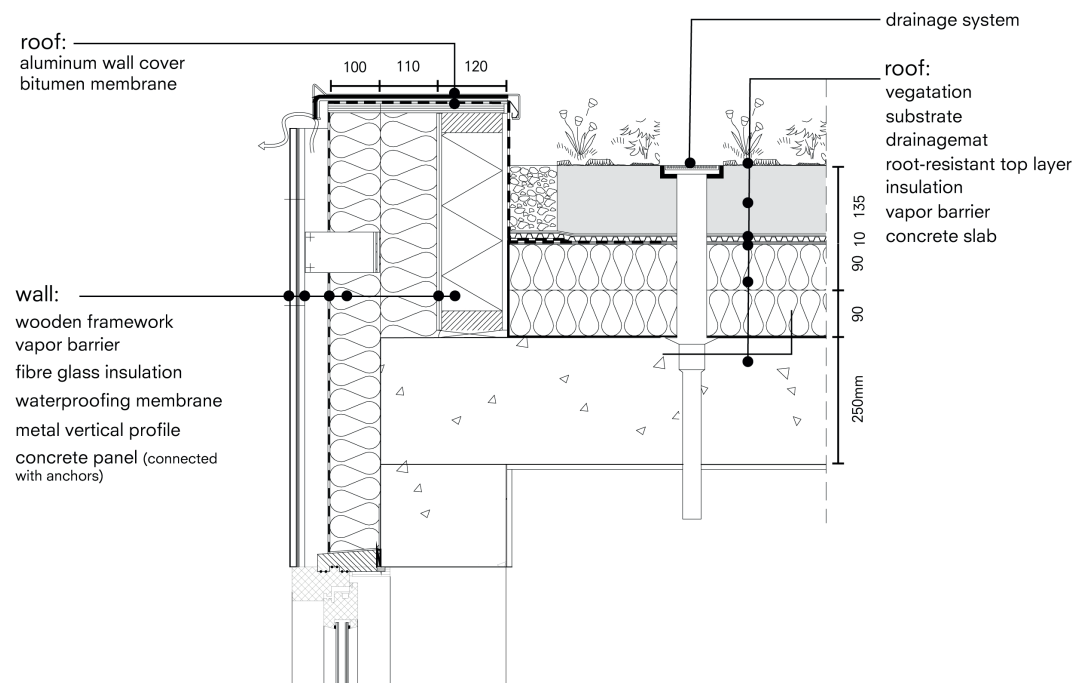


STEEL CLADDING

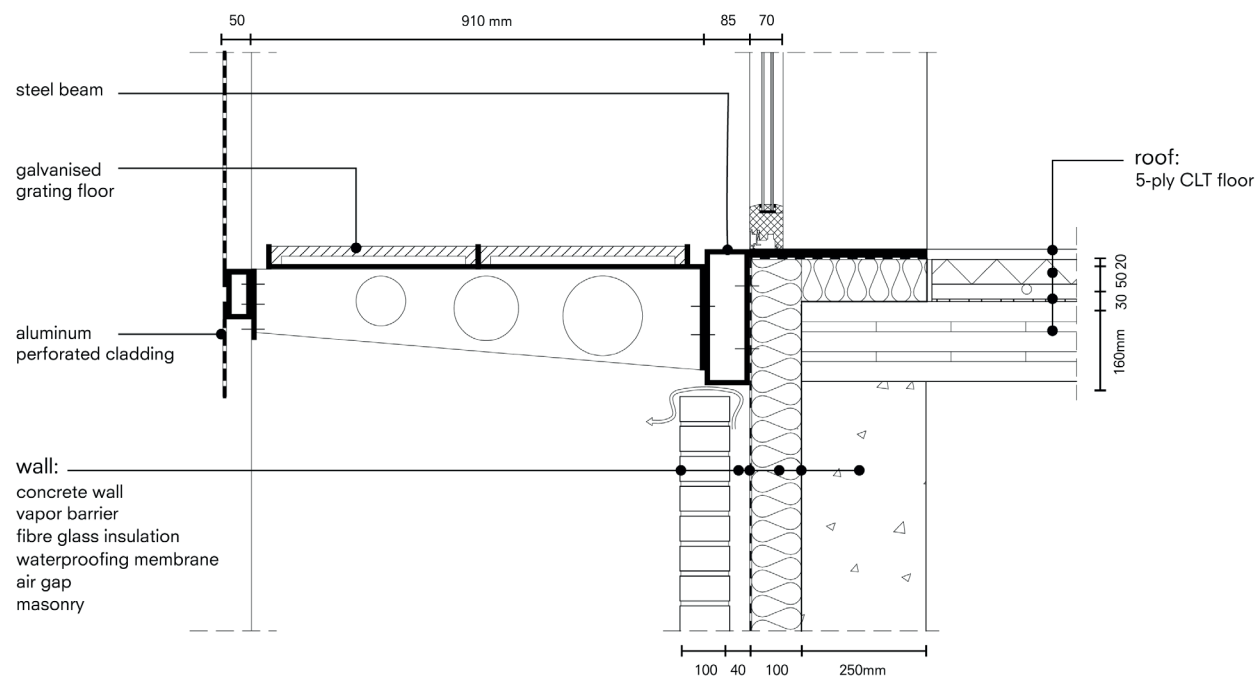
- mimick the tree for lack of view to the park (tranquility)
- privacy



1.

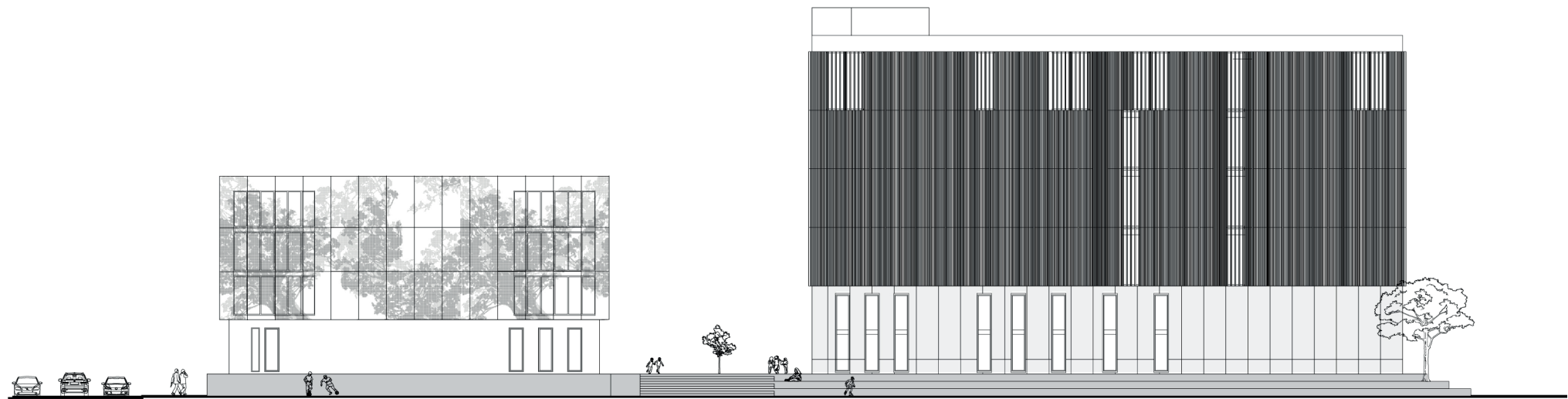
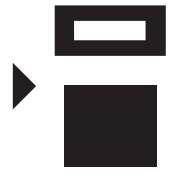


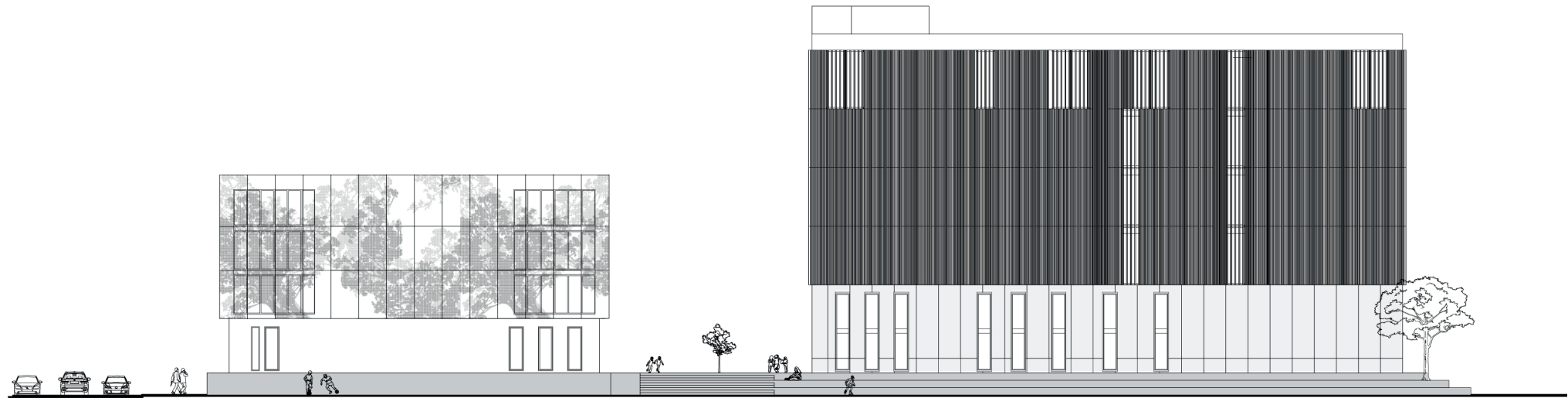
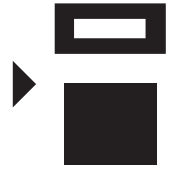
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Figures

Figure 1.1: Retrieved from <https://www.morgenpost.de/berlin/article238200671/polizei-berlin-kriminalitaet-statistik-messerattacken-straftaeter.html>

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