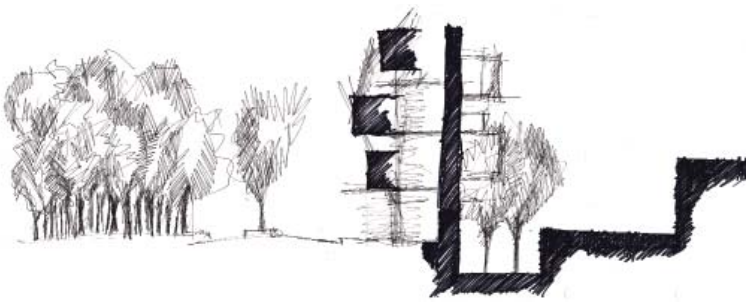
A SPATIAL INSURGENT AS DEVICE FOR URBAN COHESION

AN OPPORTUNISTIC PANACEA AGAINST THE MEGALOMANIA OF MODERNIST PRETORIA



Marlette Burger

With special thanks to

Mr Nico Botes and Dr Arthur Barker
for guidance and belief in my project.

Marie
vir saam lag en huil die laaste twee jaar

Karima
sonder jou hulp sou ek nie klaargekry het nie

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Tannie Alma
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My Saturday Friends
for your prayers and support

en

JCB en LJB
vir liefde en ondersteuning,
bemoediging en begrip
en vir drome realiseer

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Course coordinator: Dr Arthur Barker
Study leader: Mr Nico Botes
Editor: Ms Christine Joubert
Proofreader: Mrs Leonie Bester

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ABSTRACT

Pretoria has a complex history; a contested social legacy and a rich physical context. It was severely modernised in the 1960s, destroying and discarding many of these narratives. The consequences of those decisions left us with a city devoid of a healthy street life; a city lacking comfortable public spaces; a city for buildings, not a city for people.

The city belongs to however has power, whether political or financial. It does not belong to the dweller. The city became a means to exert power. As hegemonies change its pendulum effect can be seen in the city. Building projects are used to strengthen the ideologies of each regime. It this battle of who owns the city the rich narrative of Pretoria is lost.

This project interrogates the site physically, historically and socially to get to the essence of what makes this place unique; to get to the basic elements that make it A place and not just ANY place. It also looks at theoretical approaches and precedents that give evidence of similar urban challenges and their appropriate responses. The essential site conditions are clearly demarcated and became the design drivers.

The design drivers are: The site in its physical and historical context; the existing programmes; as well as systems needed for a sustainable intervention.

Through a process of analysis and design the concept originated from the meeting of two conditions on site. The one condition is the built fabric and the other condition is the urban forest. The meeting of the two become the threshold not only between the two conditions but also between the inside and the outside of the new public square. The structure acts as a stoep into the city, a structure that is both a wall and an entrance.

This concept is taken through to the detail level. It aims to not only connect the urban and the built conditions but also the myriad of loosely scattered programmes in the vicinity. It intends to bring them together through the augmentation of the existing programmes into an identifiable, cohesive public space.

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"The architects, planners and businessmen are seized with dreams of order, and they have become fascinated with scale models and bird's-eye views. This is a vicarious way to deal with reality, and it is, unhappily, symptomatic of a design philosophy now dominant: buildings come first, for the goal is to remake the city to fit an abstract concept of what, logically, it should be." - Jane Jacobs (Jacobs 2011)

CHAPTER 1

INTRODUCTION

Figure 1.1 ~ Authoritarian design.psd

The modern city developed into a "physical object and a technical project"
(Lehtovuori 2010: 114)

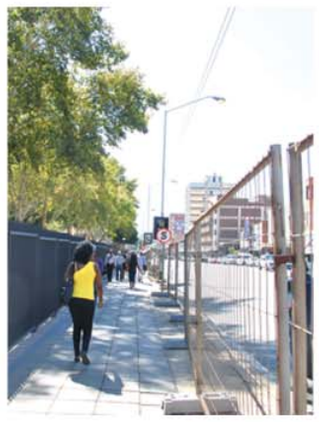
Figure 1.2 ~ Existential outsideness.psd

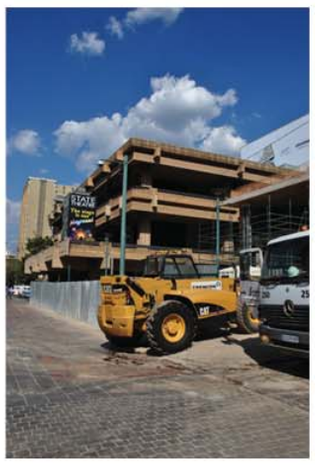
The city dweller lost his voice and is effectively existentially left outside.

WHOSE CITY IS IT ANYWAY?

The modern city is a physically controlled space of order and sanitation, a space striving for pacifism and certainty. The traditional city, on the other hand, was physically "contingent" (Lehtovuori 2010:114). It was understood as an "ethical and political unit" (Lehtovuori, 2010:114). The conception of the traditional city was for the exact opposite reason, namely to negotiate conflict and tension (Harvey 2008). Cities have therefore become sterile. They are largely devoid of stimulation. The modern city has developed into a "physical object and a technical project" (Lehtovuori 2010: 114). The city today is a privately owned space with directed usage and limited interaction.

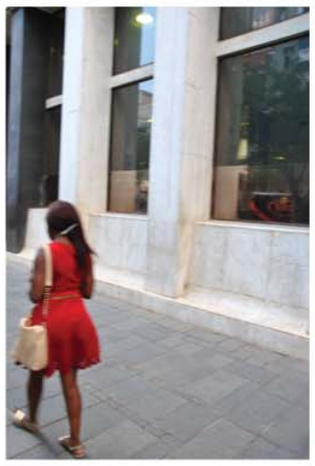
Consequently cities do not belong to the inhabitants anymore. Inhabitants lost their right to the city (Harvey 2008). The user of the city therefore does not have the right to manipulate the space that he lives in. To be able to manipulate and re-appropriate our environment is part of our human nature (Harvey 2008). It is therefore our "space of representation" (Lefebvre 1992) that is being limited and restricted. Today, public life has nothing to do with "being" (Heidegger 1962). It is a commercialised activity supported by a consumerist culture. We do not have truly public lives anymore.









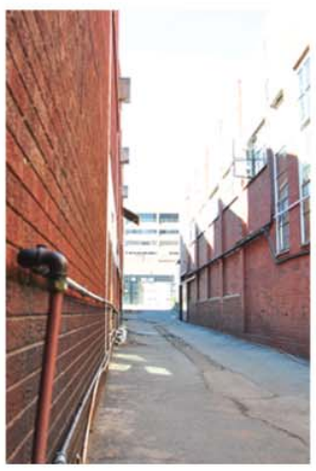



Figure 1.3 ~ Site photos.psd

PRETORIA SINCE 1960

During the 1960s Pretoria CBD developed into a modernist city – traditional architecture had to make way for the new vision the state had for a twentieth century modern city. Great inspiration was taken from the Brazil Built movement. Unfortunately like all modernist cities, Pretoria became a city focussed on sufficiency and universality. Zoning destroyed the inner city and vehicles ruined the street. Public life was pushed out. Private ownership isolated the citizen from the city.

Lilian Ngoyi Square and immediate environment is steeped in biased representations of previous hegemonies. Like a pendulum, the representations of history swings from one bias to another. In the power struggle of who owns the city, the city became an object to be manipulated from above. The city is not owned by the dweller but rather by capitalists with political or financial agendas. It disregards the embedded narrative and the dweller. In the process the city dweller lost his voice and is effectively existentially left outside[1]. (Relph 1976)

Pretoria inner city has a lack of cohesive public spaces. Historic contestation for space and recognition fragmented the urban experience into privately owned monumental or commercial spaces. Historic significance and physical memory is disregarded and forgotten. The successful narratives of public life are marginalised and unrecognised by the existing architecture.

[1] ***"Existential outsideness—a sense of strangeness and alienation, such as that often felt by newcomers to a place or by people who, having been away from their birth place, return to feel strangers because the place is no longer what it was when they knew it earlier. "(Relph 1976)***

Figure 1.4 ~ Site of intervention.psd

We have to tell all the stories and not propagate only one.

URBAN INTENTION

Set on the forgotten site on the corner of Sisulu (Prinsloo) and Helen Joseph (Church) Streets the design aims to undermine the existing architectural megalomania of the modern "object" city of the 60s that not only killed the street, but severed the city dweller from a public life. By creating a device that exposes all the narratives of the site, unbiasedly (including history, formal and informal use, architecture and materiality) it aims to bridge the "object" city of the 60s with an "experience" city for the future.

The author postulates that in order to counter this phenomenon we have to mediate between the residual spaces left "outside" due to historic and economic contestations. We have to counter the lack of cohesion both spatially and programmatically. We have to acknowledge and allow a layering of the history without bias. We have to tell all the stories and not propagate only one. We have to tap into intimate traditional narratives that still exist in the shadows of Pretoria's brutal modernism and manifest them again.

ARCHITECTURAL ISSUE

The main architectural issues include the inaccessible and uninviting edge conditions on the site. . The lack of visibility of programmes on site and the unobtrusive entrances also need to be addressed.

The thresholds between public and semi-public spaces, semi-private and private spaces are crucial issues in the existing condition and needs to be clearly articulate.

Moreover, the lost spaces between buildings and programmes must be programmed and designed to form proper thresholds between buildings and programmes.

Overall the coherency of the site need be addressed through a larger vision of the area. This will inform the intervention with a guiding identity the site needs to attain.

Inaccessible edge conditions
Lack of thresholds
Unprogrammed lost spaces
Incoherent

ARCHITECTURAL INTENTION

The main intention of the intervention is to undermine the existing megalomania of the 1960s built legacy. It intends to do this by activating the edge conditions to create energetic street façades. A public device that functions as a traditional public square will act as an adhesive to connect the unconnected programmes surrounding the site. The intention is for the device to act as less of a building and programme in itself, but more as a device that augments the existing by bringing the existing conditions into a coherent whole. The new intervention uses edge conditions, threshold treatments and materiality to assemble the site into a coherent whole.

Subvert the existing megalomania
Activating edge conditions
Public square as adhesive
Augment the existing
Create coherent whole

"Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody." ~ Jane Jacobs (Jacobs 2011)

"The freedom to make and remake our cities and ourselves is, I want to argue, one of the most precious yet most neglected of our human rights." ~ David Harvey (Harvey 2008)

CHAPTER 2

THE SQUARE

A HISTORIC OVERVIEW OF LILIAN NGOYI SQUARE

Lilian Ngoyi Square, formally Strijdom Square and formally Market Square has a rich and contested history. The aim of this chapter is to understand the role of this site in the history of Pretoria and to understand the effect that the modern movement had on it. The squares contested history became the main driver for the urban vision.

Market Square

The city block between Lilian Ngoyi (Van der Walt) Street and Sisulu (Prinsloo) Street and between Helen Joseph (Church) Street and Pretorius Street used to be the Old Market Square of Pretoria.

The Market Square was proposed in September 1882 to develop as a successor to the original Church Square (Staatsteater Pretoria 1981). In 1889 J.D. Celliers was assigned the task to build a structure that could accommodate markets. The market hall was finished in 1891 (Staatsteater Pretoria 1981).

> *"'n Reeks winkels en 'n hoofingang tot die markgebou is later tussen die saal en Kerkstraat gebou. Toe is verdere markgeboue en winkels opgerig en die hele terrein het in 'n bedrywige sakebuurt ontwikkel" (Staatsteater Pretoria 1981).*

The market hall was used for fairs, receptions, court procedures and political gatherings (Staatsteater Pretoria 1981). Animals were kept at the back of the market hall – a precursor of the zoological gardens that later developed in Boom Street (Staatsteater Pretoria 1981). Furthermore it used to house the first museum before the Staats Museum was built in Boom Street (Staatsteater Pretoria 1981). In July 1895 the official opening ceremony of the Delagoa Bay Railway Line was held at the Market Square for which artists Frans Oerder and Anton van Wouw created wall murals of the landscape between Pretoria and Delagoa Bay (Staatsteater Pretoria 1981). On 27 April 1896, the market hall also became the courtroom where Lionel Phillips, George Farrar, John Hays Hammond and Frank Rhodes, were sentenced to death for the Jameson Raid (Ball 2013). In front of the market hall a diverse array of shops developed, lining the street. This included, amongst others, a music shop, animal feed traders, cafés, a liquor store, a cycle shop, a typewriter agency, a pharmacist, and a confectioner. (Staatsteater Pretoria 1981). Market square had a vibrant edge with vigorous pedestrian interaction. It was the place to meet people, to trade stories, news and goods, but also a place to have needs met and appetites satisfied.

Market square had a vibrant edge with vigorous pedestrian interaction. It was the place to meet people, to trade stories and news and goods and to have needs met and appetites satisfied.

Figure 2.1 ~ The old Market Square.psd

Strijdom Square

This all changed around the 1960s when South Africa became an independent republic. In order to show the world that South Africa could compete as a world class city, large scale building projects were launched. The plan was to demolish the western façade of Church Square to make way for a brutally modernist building. Fortunately after long and aggressive opposition from the public, the plans were not approved and the original western façade was saved (Bolsmann 2001).

In the same spirit of modernisation the area around Sisulu (Prinsloo) Street was also being re-envisioned. The old vibrant Market Square was demolished to make way for the State Theatre, The ABSA Building and Strijdom Square.

Figure 2.2 ~ Planned new administration building.psd [Bolsmann 2001:99]

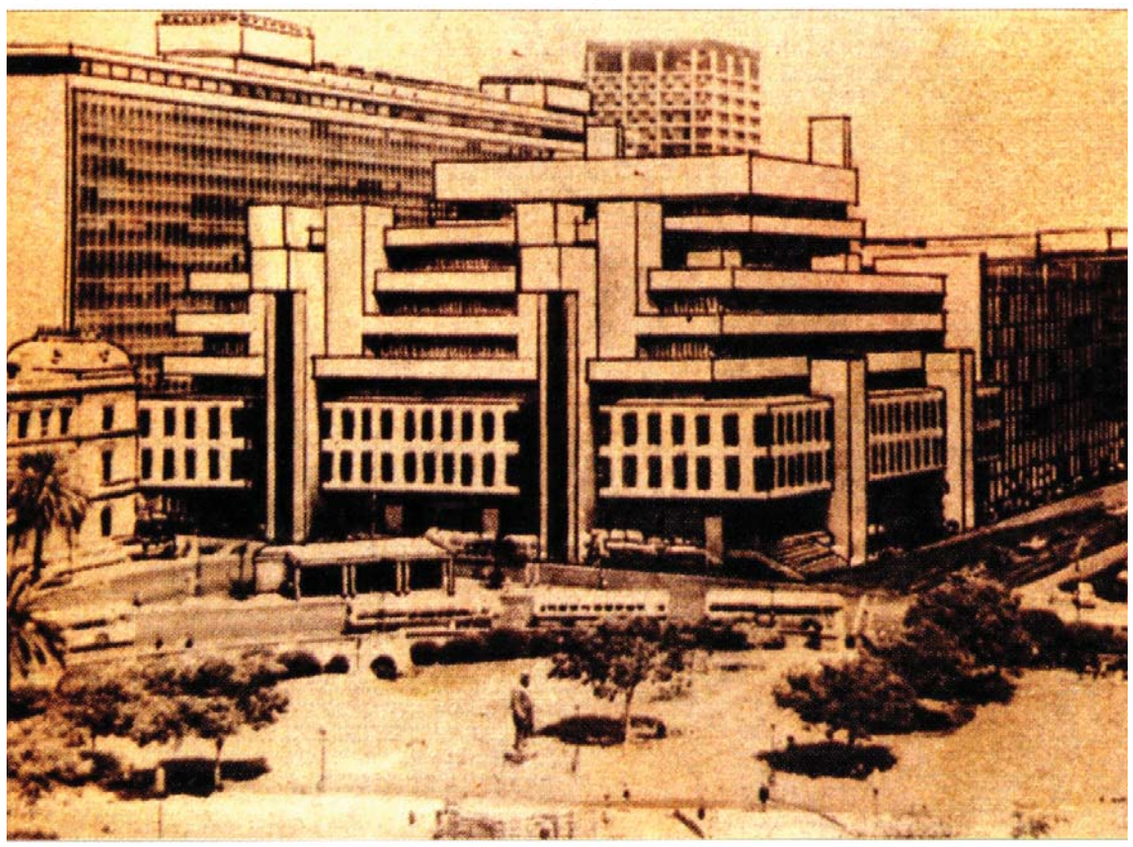
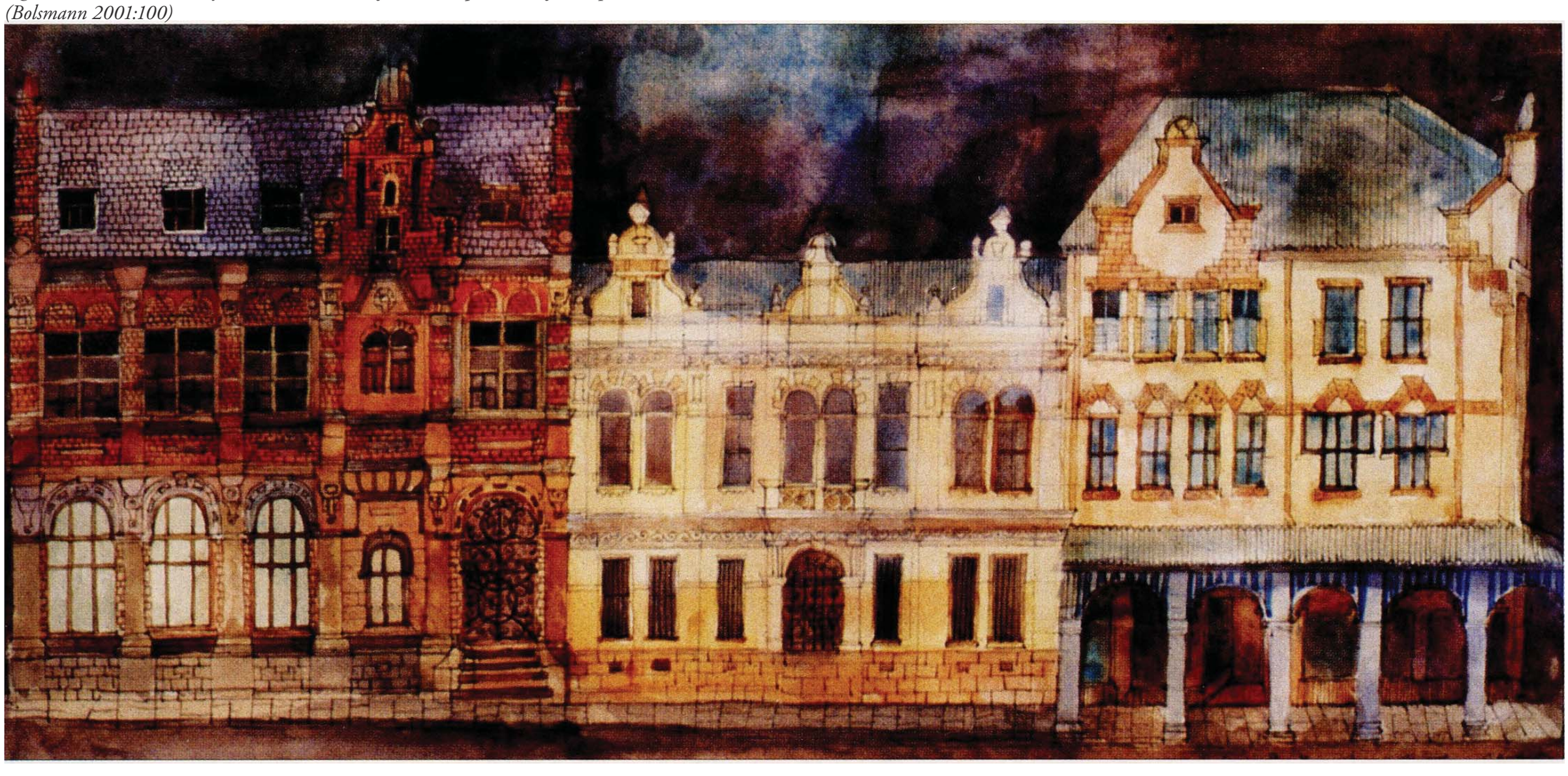


Figure 2.3 ~ Watercolour by Carola Brotherton of Church Square west facade.psd (Bolsmann 2001:100)



Public Reception of the modern Pretoria

In an article by William Saunderson Meyer in the Rand Daily Mail on 23 November 1979 Mr Alan Konya, from the Department of Architecture at the University of Pretoria said,

> *"Pretoria's architects and town planners have identified closely with the brash and discredited US architecture of the 60s – and this has led to the razing of almost all the old buildings of the turn of the century. Many of the modern developments, like Strjidom Square, seem hell bent on destroying the city centre for people" (Saunderson Meyer 1979).*

According to another unnamed architect the square is a "fiasco" (Saunderson Meyer 1979). "It was never designed to attract the public to sit around and enjoy the sunshine. With the new Volkskas (ABSA) building looming over it and the vast expanses of marble, it is as cold and draughty as a mausoleum" (Saunderson Meyer 1979). Alan Konya continued by saying that with the new State Theatre on the same block it makes it "just a jumble of concrete" (Saunderson Meyer 1979). Ten year earlier it was an appealing and energetic market square with many diverse shops and stalls connected by charming paved lanes. (Saunderson Meyer 1979) Alan Konya suggested it,

> *"…could have been changed into a flea market with craftsmen's stalls, artists' and fresh produce stalls. Combined with the spicy Indian shops which lined Prinsloo Street… the whole area could have become similar to … Portobello Road in London" (Saunderson Meyer 1979).*

"Diversity is being built out of the city centre." ~Dieter Holm
(Saunderson Meyer 1979)

Professor Dieter Holm, from the Architecture Department of the University of Pretoria said,

> *"Diversity is being built out of the city centre. The small businessman who could afford the rentals in the older buildings is being forced out because of the high rentals in the skyscrapers" (Saunderson Meyer 1979)*

He states that,

> *"with its attractive surroundings, its out-of-doors climate and its old buildings, careful re-use and restrained but imaginative urban planning could have made Pretoria one of the most beautiful cities of the world. Instead it is becoming one of the ugliest – lifeless and cold, forgetful of its past" (Saunderson Meyer 1979).*

Before the large scale modernisation of the area the buildings and streets accommodated the pedestrian and street life. It was an energetic space. Today the monumental structures of the State Theatre, ABSA, the Reserve Bank and the new Womans' Memorial do not cater for street life or pedestrians. It is totally inaccessible and uninviting. In the early 1990s the Sammy Marks Square tried to counter that and succeeded in a small way, but a lot more could be done.

However, the resilience of the city trader can be seen in the hundreds of informal vendors that line Helen Joseph (Church) Street. Today hundreds of gazebos appear every morning at around 10:00 to start catering for the lunch hour and disappears when the sun goes down after capitalising on homeward bound pedestrians. The existing modernist structures are merely a backdrop for the real daily life happening on the street. They make no contribution to the public street life of the city.

"Pretoria ... is becoming one of the ugliest (cities) – lifeless and cold, forgetful of its past" ~ Dieter Holm (Saunderson Meyer 1979)

Figure 2.4 ~ The finished State Theatre.psd [Staatsteater Pretoria 1981]

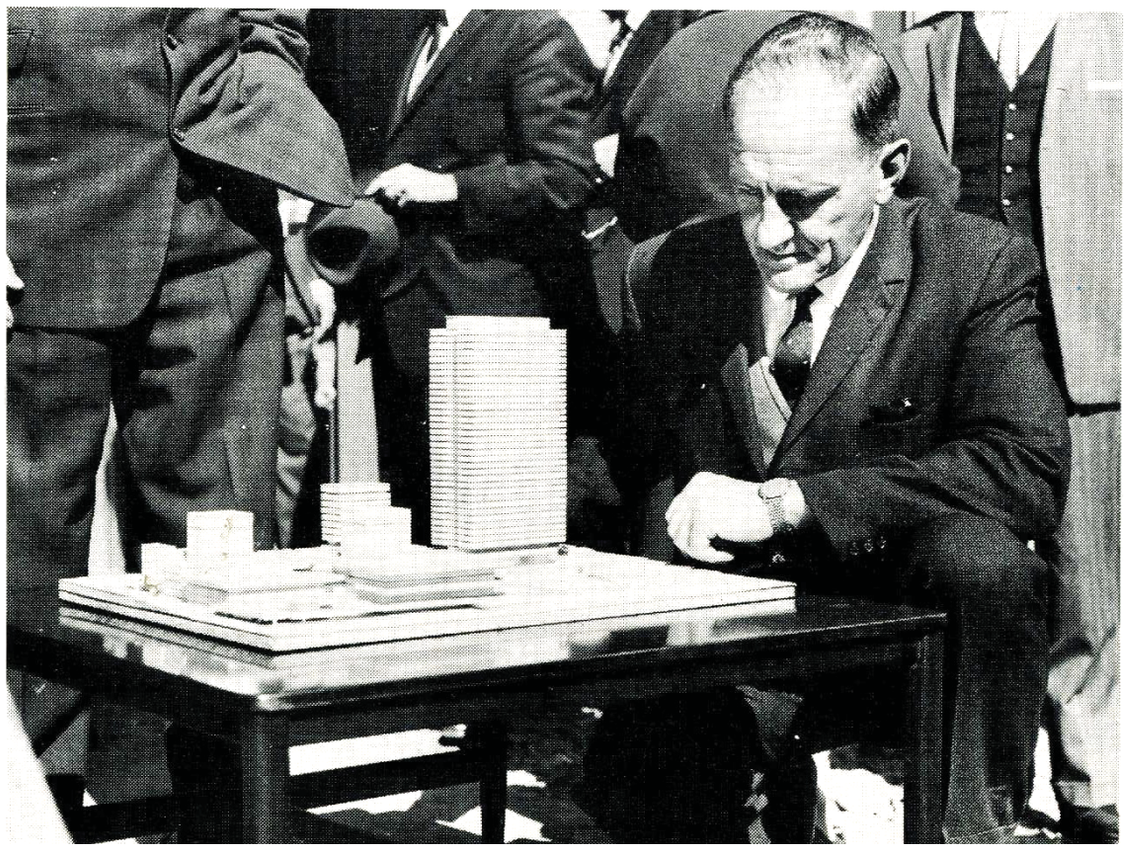


Figure 2.5 ~ Model of the State Theatre and the Volkskas Bank.psd [Staatsteater Pretoria 1981]

Figure 2.6 ~ State Theatre and Volkskas Bank in construction.psd

Contested histories

Considering the history of the market square we observe that the square is most effective and vibrant as a public space when the architecture allows for interaction with the street life. During the time of the Market Hall the structures lined the street to tap into the pedestrian traffic. Today the formal architecture makes no contribution to the street and neither is its program dependent on the pedestrian. This increases the opportunities for the informal vendor to use the existing street energy.

So why is it that the physical city lost its connection with its dweller? The modern movement in architecture adapted the modern philosophy of objectifying the city as an image, an efficient machine, an ordered program, a sanitised entity and a universal application. In the classical city the physical structure was conditional. Panu Lehtovuori stated that "a city was conceived of as a political and ethical unit. In contradiction, the modern city was a physical object and a technical project" (Lehtovuori 2010:114).

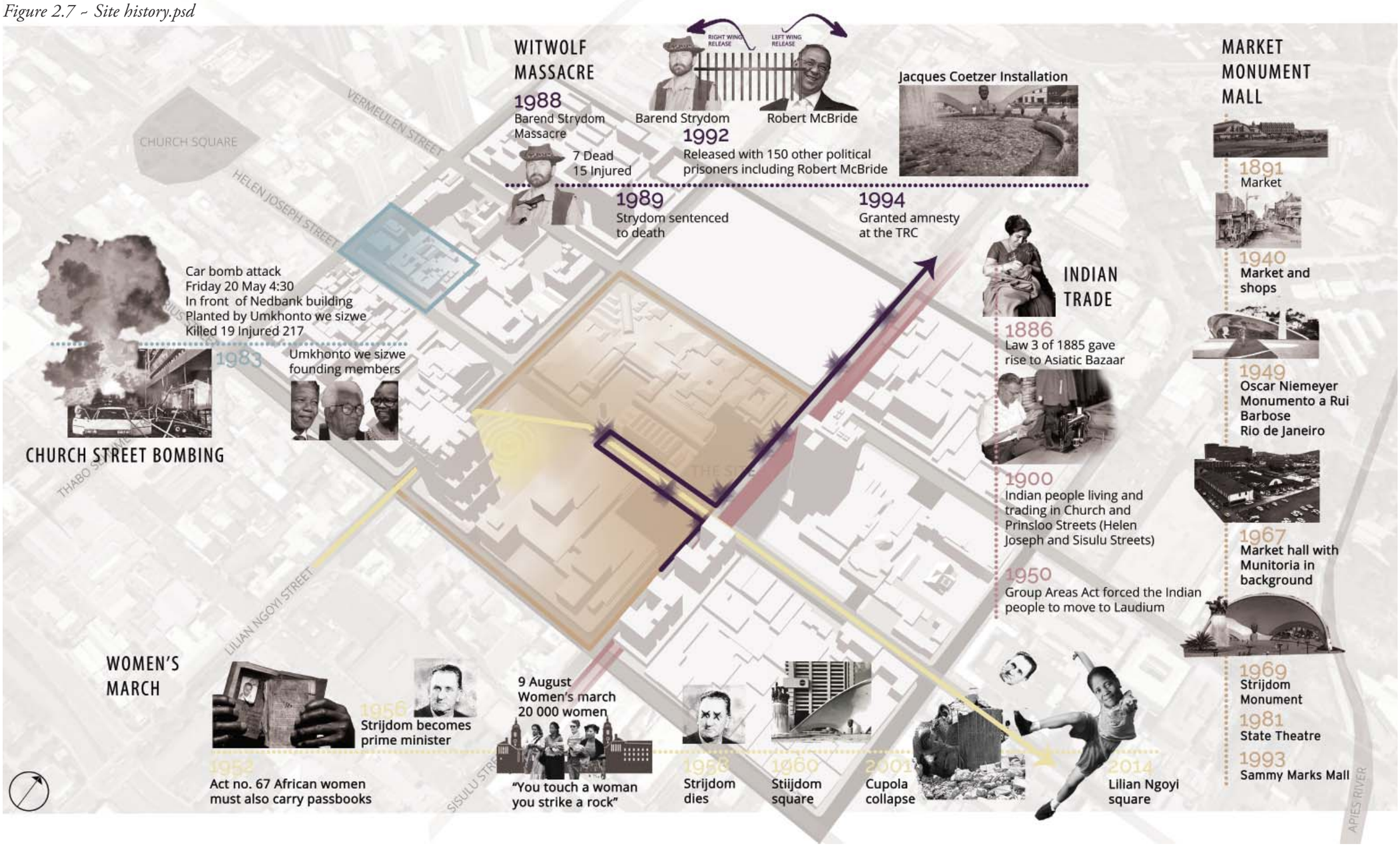
The city became the tool to manipulate and empower each new system of hegemony. The initial purpose of the Market Square was for trade and information. It was for the sole purpose of serving the people.

During the 1960s the purpose of the large scale building project was to establish Pretoria as an image of a world city. Disregarding more than half of the population with its apartheid laws, it created a biased version of a city they thought represented the ruling party. For the first time Pretoria explicitly adhered to the modern movement by following the lead of Brazil to create monumental buildings that propagates the success of the independent Republic of South Africa. Rob Krier stated that society became obsessed by the free-standing building and it became a prerequisite of the modern movement in architecture and for urban planning. (Krier 1979)

With the collapse of the cupola of the Strijdom Monument in 2001 the post-apartheid government only reinforced this bias: A massive memorial to the women who marched to the Strijdom administration at the Union Buildings in 1956. The march against the pass book laws of 1952. The only difference is that the bias is now in favour of the previously disregarded. The pendulum just swung the other way.

Apart from the physical effect of the biased representations of the city the square is also steeped in historic contrasts. By 1900 Sisulu (Prinsloo) Street was a lively street, a vibrancy that was derived from an array of Indian traders. These traders were however forced to relocate due to the Group Areas Act of 1950 leaving the area desolate and falling into ruin. It opened up the space for a national building project of monumental scale, a project where J.G. Strijdom was venerated through the Strijdom Square design. Today it is Lillian Ngoyi, Helen Joseph, Sophie Williams and Rahima Moosa who are being honoured through the new Women's Memorial building. Furthermore, in 1983 left-wing uMkhonto weSizwe founded by Nelson Mandela, Walter Sisulu and Govan Mbeki planted a bomb in Helen Joseph (Church) Street that killed nineteen people. No reference is made of this tragedy. It is a part of history is swept under the carpet. Also in 1988, right-wing Barend Strydom's massacre killed seven people on the square and in Sisulu Street (Prinsloo Street). No mention is made of this either. The victims' names are not even known. This aims to illustrate how deeply this site is steeped in historical biases. To this day history still vies for attention on this site.

Figure 2.7 ~ Site history.psd



Mapping and urban vision

An analysis of the site both of its physical and historical character, led to the following conclusions.

Conclusion to mapping

Mapping of the site revealed the following problems. Pedestrians do not have priority, both Sisulu (Prinsloo) and Lilian Ngoyi (Van der Walt) Streets are highly trafficked and dangerous to cross. A vision to promote pedestrian hierarchy must be put forward. This includes more and better quality public seating spaces. Pop-up market stalls in Helen Joseph (Church) Street are plentiful and vibrant. Giving these vendors amenities for their stalls will raise the standard of the stalls and encourage entrepreneurship. Arcades are an important form of circulation in Pretoria due to its large city blocks and should be incorporated in the larger vision. The problem of inaccessible façades should be addressed and new interventions must accommodate for access from the street. The existing programmes on site must be more visible to the city user and more easily accessible.

Figure 2.8 ~ Summary of site analysis.psd (Oosthuizen 2015)

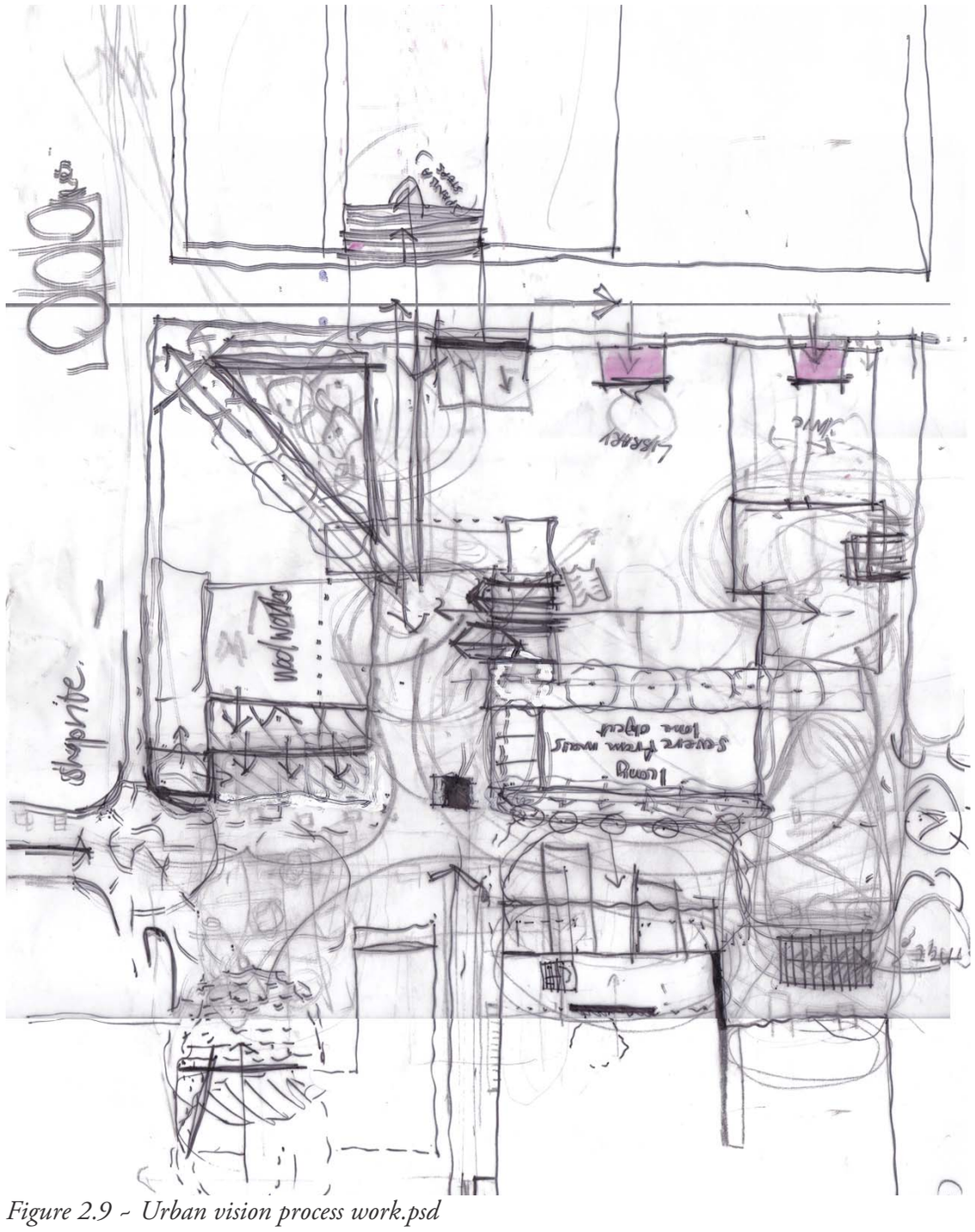


Figure 2.9 ~ Urban vision process work.psd

Figure 2.10 ~ Summary of urban vision.psd

Urban vision

The following decisions form the urban vision for the city area immediately surrounding Lilian Ngoyi Square.

- Establish the two city blocks between Madiba (Vermeulen) and Pretorius Street and between Lilian Ngoyi (Van der Walt) and Sisulu (Prinsloo) Street as the cultural precinct due to the State Theatre. Treat it as one square and promote Helen Joseph (Church) Street between these blocks as a pedestrian-only street by narrowing it and changing the surface treatment to something more appropriate for pedestrians.
- Design purposeful pedestrian-priority foot crossings over the busy streets.
- Articulate the existing arcades and lengthen it towards to south and the tram sheds.
- Establish Helen Joseph (Church) Street west of Lilian Ngoyi (Van der Walt) Street as a retail precinct including the shopping centre of the Sammy Marks Centre.
- Strengthen the existing pop-up market west of Lilian Ngoyi (Van der Walt) Street by providing amenities through robust street furniture designs. Use trees as shading devices and spatial structures to support the market.
- Design a space of repose with lots of seating space and a high density of trees in front of the new Women's Memorial. This will form a connection between the tree pockets of the market and the urban forest by the South African Reserve Bank.
- Establish the space in front of the State Theatre as an extended foyer and allow for public outdoor programmes to facilitate this.
- Establish the space including Tshwane House, the Es'kia Mphahlele Library and the FF Ribeiro Clinic as a civic precinct.
- With the Tshwane House being built just north of the site, the vision is to create a large staircase south of Tshwane House towards Madiba (Vermeulen) Street. This will serve as an invitation into the civic space. In addition to this, a part of the Sammy Marks Centre building must be opened on the north-west in order for it to face north. At the moment the Sammy Marks Centre's northern façade is completely closed and impenetrable. Opening the north-western corner will create a gateway into the retail precinct. Its location will be ideal for an outdoor cooking space to cater for the thousands of people moving to and from the Bloed Street Taxi Terminal to the north.
- The space around the South Africa Reserve Bank was designed as a public garden with water fountains, urban furniture, artwork and trees. However, it has since been fenced off from the public. The vision is to open it up once again and declare it an urban forest. More trees should be planted and the space underneath purposefully designed as a space of repose for the city user. This will serve as the pivotal point from which all of the extended tree pockets will radiate out into the rest of the city.
- East from Sisulu (Prinsloo) Street a myriad of schools, colleges and academies can be found most of them with inner courtyards. This must be established as the didactic precinct and programmes and interventions in this precinct should provide for that. Concentrated tree pockets must be introduced into the courtyards.
- The site opposite the State Theatre and the South African Reserve Bank forms the corridor that connects the civic precinct, the urban forest, the State Theatre foyer and the didactic precinct. Its purpose will be to connect and augment the existing programmes. It is an overlooked, un-programmed former building site that is mostly fenced off from the public. It has a non-distinct entrance to a clinic and includes a library façade with no connection the street at all. Stronger, more visible entrances to both the clinic and the library must be designed towards the north and onto Madiba (Vermeulen) Street. The new intervention must make the space useful and contribute positively to the city.

"Buildings are not merely physical form but cultural and social constructs which relate to wider, changing ecological, economic, political and technical sensibilities and concerns." ~ Robert Brown and Daniel Maudlin (Brown & Maudlin 2012:354)

"Ideas forged in the Parisian intelligentsia of the 1920s came to be applied to the planning of working class housing in Sheffield and St. Louis, and hundreds of other cities too, in the 1950s and 1960s; the results were at best questionable, at worst catastrophic" ~ Peter Hall (Hall 2002:219)

CHAPTER 3

A THEORETICAL APPROACH

Figure 3.1 ~ Traditional versus modern city.psd

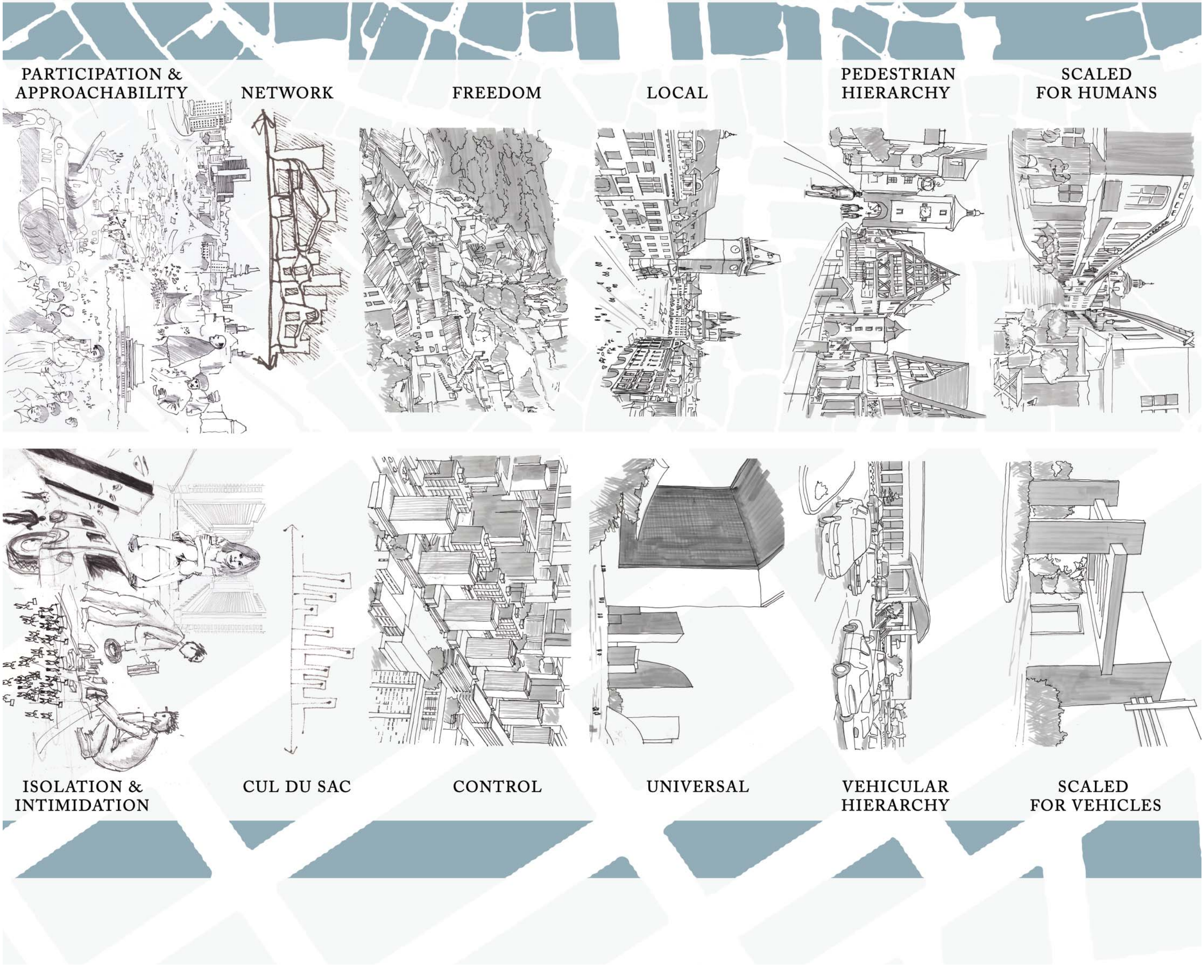


Figure 3.2 ~ Le Corbusier's unbuilt "Plan Voisin" is an object, not a city.psd [Muller Bueno 2013]

Our modern cities in their pursuit of progress and control forgot their initial raison d'être: that cities are a human construct based on the slow evolution from the nomadic to the sedentary lifestyle. Instead we see cities sprouting up like mushrooms today, built from two dimensional plans, determined by planners and politicians.

The object city, as a construct of modernist thinking will be discussed first, after which probable solutions will be studied. Of the theories to counter the object city we will first discuss Richard Sennett's Open City and its relevance to the site in question. Secondly, a South African perspective from Roelof Uytenbogaardt and David Dewar will be discussed and possibilities of incorporation identified. Thirdly, Jan Gehl's success in making cities prioritise humans instead of vehicles or buildings led me to look at some of his guidelines. Finally, we look to Edward Relph and Lineu Castello for an explanation of what place is, what gives place identity and how this can benefit the process of proposing a new intervention on the site in question.

Sennett's Open City, Uytenbogaardt's city in context, Jan Gehl's guideline to good public space and Relph and Castello understanding of place will form the filter through which the site and its conditions will be analysed.

The chapter concludes with a look at how buildings with heritage value will be addressed.

Freezing the city in time makes it vulnerable to neglect and abandon. A city frozen in time is not resilient to change.

THE OBJECT CITY

The modernisation of our cities, whether it is George-Eugéne Haussmann's redesign of Paris in the 1860s or Oscar Niemeyer's deterministic plan of Brazilia one hundred years later, left, in its pursuit of progress, a wake of brutal cities devoid of human scaled spaces and liveable places. Several events in history point to the turn from the traditional to the modern city. Finnish architect and urbanist, Panu Lehtovuori stated,

> *"For the classical understanding, a city's physical structure was contingent: a city was conceived of as a political and ethical unit. In contradiction, the modern city was a physical object and a technical project (of ordering and sanitising)"[Lehtovuori 2010:114].*

Efficiency and universality was therefore the credo of the major building projects ever since the Second World War. The vehicle killed the street and pedestrians were pushed to what little bit of street remained, the side walk. Zoning severed people from the inner city and created the exponential growth of the suburb, hence the need for roads to accommodate high traffic volumes. Richard Sennett explains,

> *"The proliferation of zoning regulations in the twentieth century is unprecedented in the history of urban design, and this proliferation of rules and bureaucratic regulations has disabled local innovation and growth, frozen the city in time"(Sennett 2006).*

Freezing the city in time makes it vulnerable to neglect and abandon. A city frozen in time is not resilient to change. Richard Sennett (2006) referred to it as an "over-determination" with which our cities are created. A city planned as "a physical object and a technical project" (Lehtovuori 2010:114). Sennett (2006) calls such an "over-determined" city a "brittle city" because of its lack of resilience.

> *"Modern urban environments decay much more quickly that urban fabric inherited from the past. As uses change, buildings are now destroyed rather that adapted… the over-specification of form and function makes the modern urban environment peculiarly susceptible to decay" (Sennett 2006)*

The fast growing sprawl outwards from the city centre created what Marc Auge called "the proliferation of non-place the a-historic and identityless realm of highways, airports and malls" (Lehtovuori 2010:1). The vibrant inner city life, where generations of traders and families have given identity and security to the city, was destroyed when suburban development realised for the middle classes. The distinctive high streets closed down and became abandoned when franchised mono-functional shopping malls started to sprout up (Lehtovuori 2010:1). Edward Relph, in the same vein, spoke of a "placelessness" it created,

> *"the casual eradication of distinctive places and the making of standardised landscapes that results from an insensitivityty to the significance of place" (Relph 1976)*

In Pretoria, parts of the historic "high street", Church Street, was demolished to make way for less functions and more buildings that fitted the worldwide standard for being modern. Decision made in the 1960s in Pretoria attests to the eras' insensitivity towards the significance of place.

THE "OPEN CITY"

Richard Sennett theorised that "Open Cities" are the answer if we want our cities to be resilient (Sennett 2006). He advocated three elements that a city required to be an "Open City". The first element is the passage territories or the city wall – this is where unregulated development happens, where innovation and informality reigns (Sennett 2006). The wall is both resistant and porous forming a permeable edge. The second element is incomplete form (Sennett 2006). He explained,

> *"When we design a street, for instance, so that buildings are set back from a street wall, the space left open in front is not truly public space; instead the building has been withdrawn from the street. We know the practical consequences; people walking on a street tend to avoid these recessed spaces. Its better planning if the building is brought forward, into the context of other building" (Sennett 2006).*

The building on its own will be incompletely revealed, but it becomes part of the greater urban context so that the buildings become so dependent on their relationships to other that they cannot stand on their own at all.

> *"The buildings acquire their specifically urban value by their relationship to each other; they become in time incomplete forms if considered alone, by themselves"(Sennett 2006).*

In summary, we can define an open system as one in which growth admits tension and discord. This is also what Sennett intended with his third element: narratives in development (Sennett 2006). Like any good story the end cannot be known in the beginning. The story has to unfold.

> *"Rather than a lock-step march towards achieving a single end, we look at the different and conflicting possibilities which each stage of the design process should open up; keeping these possibilities intact, leaving conflict elements in play, opens up the design system" (Sennett 2006).*

Sennett postulates that if these three elements are in place the city can become a democratic place, not in the legal sense of the word, but as a physical experience (Sennett 2006). This is the kind of city aimed for in this dissertation. Sennett's elements becomes drivers for the urban response of the design.

Passage territories
Incomplete form
Narratives in development

Figure 3.3 ~ Closed versus open city.psd

A CITY IN CONTEXT

A lot has been said about the "catastrophic" consequences of the urban visions of the 1920s. (Hall 2002:219). One of these remedial visions was attempted by Roelof Uytenbogaardt and David Dewar's manifesto for South African cities. In it they postulated that an urban plan needs firstly to be rooted in a human centred understanding of the city and secondly it must value conservation (Dewar & Uytenbogaardt 1991:13). They explained the central ideas behind conservation as firstly the understanding of the city as a system in "dynamic balance": man's "activities" as based on certain available "resources" and that the "activities" and "resources" must be in balance. Secondly, conservation points to "regionalism" – this recognises "the inextricable interdependence between the characteristics of a place; (its) peoples; (its) activities in that place and (its) emergence of cultural expressions and forms" (Dewar & Uytenbogaardt 1991:13). Thirdly, conservation implies "resource sensitivity: a recognition of the importance of all resources and the need to utilise these wisely" (Dewar & Uytenbogaardt 1991:13).

Uytenbogaardt and Dewar's first principal: dynamic balance and the understanding of the activities/resources ratio are interpreted in this dissertation through an understanding of historic and current activities; as what the latent potential of the site is in terms of its programming. A thorough analysis will reveal this potential. Concerning the second principle: conservation; (which refers to regionalism) a very detailed understanding of the site and the conditions that make it unique and root it to this place will inform the design in essence. The final principal: resource sensitivity and man's consequential accountability to use resources sustainably is another important driving force. In this proposed intervention specific attention will be given to the harvesting of rainwater, the use of passive ventilation systems for the cooling of spaces and the even distribution of natural light.

CITIES FOR PEOPLE

Jan Gehl's success in Copenhagen and Melbourne and active ongoing projects a many other cities led me to his theories and guideline on urban planning and design. Working in the inner city of Pretoria with its already tall skyline and large modernist structures makes Leon Krier's argument for village scale interventions obsolete. The question is how to create human scaled architecture when the urban condition is already far beyond any human scale. Jan Gehl stated that the effort should go into the ground floor edge design of buildings.

> *"The challenge is how to incorporate large buildings in cities where people have the same small stature and slow pace that they had hundreds of years ago. There is now a considerable confusion in the gap between large and small scales and between 'quick' and 'slow' architecture. Ground floor façades provide an important link between these scales and between buildings and people. For public space and buildings to be treated as a whole, the ground floor façades must have a special and welcoming design. This good, close encounter architecture is vital for good cities "*
> *(Gehl 2013:29).*

Inactive edge conditions are one of the surest ways to destroy public life in a city. In the proposed design the treatment of edges becomes an important strategy to reinvigorate public life. Various grades of permeability are being explored in the design.

Apart from the importance of the edge conditions, Jan Gehl's analysis of the types of users and the types of activities is a guideline that can inform and strengthen public space design decisions.

Figure 3.4 ~ Grading of edge conditions.psd
(Gehl, Johansen Kaefer & Reigstad 2006:40)

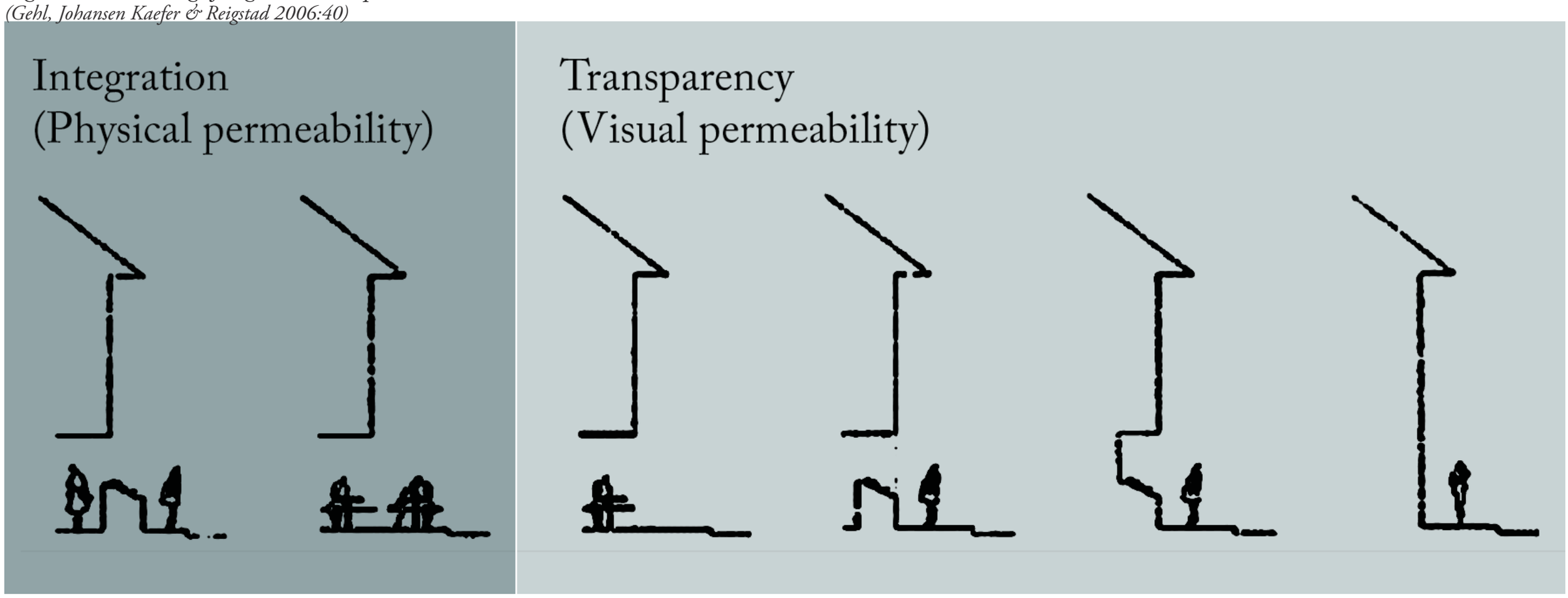


Figure 3.5 ~ Public space user group types.psd
("Public Spaces and Public Life" 2002:10)

Which types of user groups can be expected to use the public spaces?

- The everyday users: People that live and work in the area or walk through the area.
- The visitors/customers: People that visit the functions in the area.
- The recreational visitors: People that visit the area because the public space is delightful or use the public space in relation to recreation, pleasure, exercise, play etc.
- The visitors to events: People that visit the public space because of special events.

(Excerpt from Public Spaces and Public Life 2002:10)

With this in mind the following list will guide decisions about the functions necessary for the public space.

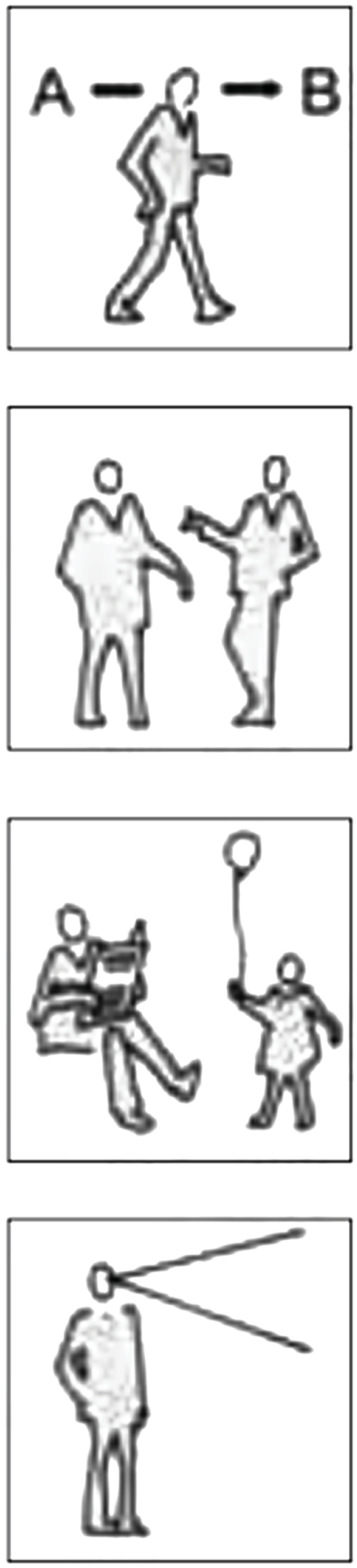


Figure 3.6 ~ Public space activity types.psd
("Public Spaces and Public Life" 2002:10)

What kind of activities can be expected in the public spaces?

- Daily necessary activity: to walk to, from or through.
- Daily recreational activity: breaks and pauses.
- Recreational activity: recreation and play.
- Planned activity: to be a spectator or participant at an event.

(Excerpt from Public Spaces and Public Life 2002:10)

Gehl's very practical guidelines have been tested and succeeded in many cities already. I will therefore continually test the design according to these guidelines.

In broader terms, the new intervention aims at the following characteristics.

Characteristics of a good city:

A good city for social and cultural exchanges
- space for cultural activities and communication
- space for street theatre, clowns, jesters, music, etc.
- small scale commercial activities
- democratic public spaces for all

A good city for talking, watching and experiencing
- low level of noise and few disturbances
- intimate public spaces
- fine views and good details
- interesting façades, windows displays and exhibits

A lively, diverse and safe city to move around in
- a wide variety of uses both day and night
- residences to ensure a 24 hour city
- educational institutions to ensure life and vitality
- open in the evenings with lit windows displays
- safe places and streets both day and night

(Excerpt from Public Spaces and Public Life 2002:8)

Three types of pedestrian activities:

Gehl distinguishes between three types of pedestrian activities that is required for good public spaces. Once again these guidelines will be used to test the design of the public spaces.

Necessary activities

In the short term, these types of activities occur regardless of the quality of the physical environment because people are compelled to carry them out. A good city provides good conditions for the many necessary activities and will retain and strengthen these activities over time.

Optional activities (urban recreation)

A good city is characterised by a multitude of optional activities. People come to town, find the places attractive and stay for a long time. A great, attractive city can always be recognised by the fact that many people choose to spend time in its public spaces.

Social activities

A good city offers a wide range of attractive social activities, and because so many people are present in the city, there are many people to experience, watch and speak to. The city becomes a lively and wonderful city. A people city.

(Excerpt from Public Spaces and Public Life 2002:9)

These practical guidelines will be used as a measure for the physical design of the public space.

Location
Natural and cultural
Network of circulation
Localisation of larger context

WHAT CONSTITUTES "PLACE"?

The final theoretical filter through which the site will be analysed is the idea of place and the identity of place. Edward Relph analysed Lukermann's (1964) concept of place as first having a location. It is specific to a unique "site and situation" (Relph 1976). It therefore has "spatial extension" meaning you can be inside or outside it (Relph 1976). Place furthermore has a unique combination of both natural and cultural features (Relph 1976). It also consists of a unique network of circulation that contains an interrelated "system of spatial interactions and transfers" (Relph 1976). The fourth characteristic of Place is that of localisation (Relph 1976): The place is part of a larger area and even though it is a complete place in its own right is carries in it the DNA of the larger context. Furthermore, it is always "emerging and becoming" and therefore becomes historical (Relph 1976).

Lineu Castello (Castello 2010) explained place as a "qualified space … that comes to be perceived by the population through the motivation of human experiences based on the apprehension of environmental stimuli." The stimuli include:
- Narrative
- Reputation
- Natural assets
- Association with historic buildings (like the Gundelfinger building or the State Theatre)
- Associations with political actions (like the Women's March or the killings of Barend Strydom)
- Associations with local tradition
- Building with emotive connotations
- The construction of fantasy / illusion / image associated with a place
- The availability of sensory enjoyment and comfort
- The availability of goods, services or technological facilities (like libraries, clinics, shops, restaurants and Wi-Fi spots)

(Summary from Castello 2010:4)

Relph and Castello's theory of place will guide in the design process to strengthen the site's identity by strengthening the elements that makes in a "place".

"A mind-set, an understanding of the city, or parts of the city, as an outcome of natural, cultural and socio-economic processes that construct it spatially, temporally, and experientially"

(Bandarin & van Oers 2014:198).

HERITAGE APPROACH

The Historic Urban Landscape (HUL) approach looks at the wider context when it comes to heritage. It does not stop at the site's boundary. It considers the city as a network of layers with cultural and natural values. It extends beyond what the historic component or the historic collective is. It considers the broadest urban context and how it is geographically seated.

> *"This wider context includes the site's topography* (e.g. located on a natural water reservoir between two mountain ranges), *geomorphology and natural features; its built environment* (e.g. Dutch heritage and the Kirkness brick; Japanese metabolism) *both historic and contemporary; its infrastructure above and below ground* (e.g. the water furrows)*; its open spaces and gardens; its land use patterns and spatial organization; its visual relationships (*e.g. straight visual axis of Helen Joseph / Church Street)*; and all other elements of the urban structure. It also includes social and cultural practices and values, economic processes* (e.g. use of street edges where buildings are pushed back), *and the intangible dimensions of heritage as related to diversity and identity"(*e.g. the Women's March, the Indian Bazaar and the Barend Strydom killings) *[Bandarin & van Oers 2014:200].*

The HUL is therefore "a mind-set, an understanding of the city, or parts of the city, as an outcome of natural, cultural and socio-economic processes that construct it spatially, temporally, and experientially." (Bandarin & van Oers, 2014:p198).

> *The HUL "is as much about buildings and spaces, as about rituals and values that people bring into the city. This concept encompasses layers of symbolic significance, intangible heritage, perception of values, and interconnections between the composite elements of the historic urban landscape, as well as local knowledge including building practices and management of natural resources. Its usefulness resides in the notion that it incorporates a capacity for change." (Bandarin & van Oers 2014:198)*

To be able to make responsible decisions regarding the heritage of the site means that the site must be understood in every aspect of its history, its values, its built heritage, its symbolic meaning in the city and more. Following this approach requires a very deep analysis of the site.

"By three methods we may learn wisdom: First, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest." ~ Confucius

"Wisdom is learning what to overlook." ~ William James

CHAPTER 4

PRECEDENTS

Four precedents will be discussed. First, the New York High Line Park was chosen for its ability to form a coherent whole, yet with a multiplicity of functions and open ended uses. The Metropol Parasol in Seville gives a clear understanding of what typology will be appropriate. The third precedent looks at the traditional ancient Roman Baths and how its rituals informs the progression of public to private even in today's contemporary society. And finally a quick look at traditional African public spaces and how a square in a cosmopolitan city can address different communities.

HIGH LINE PARK

Location: New York, USA
Year of completion: 2009
Architect / designer: James Corner Field Operations with Diller Scofidio + Renfro
Client: City of New York
Reference: Rosenfield, 2014

The High Line Park in New York was created on a disused part of an elevated rail line. It became a pedestrian route through a part of the city that was neglected and forgotten. By opening up this rail line and re-appropriating it as in inner city park, it opened up a part of the city to the dweller that was previously inaccessible and dangerous. It became a catalyst for many other projects of renewal in the vicinity. The High Line Park uses the existing city conditions and addresses them in a different and unique way. A gallery overlooking the "theatre" of traffic from an elevated position gives the pedestrian hierarchy over the vehicle. The wildflower and grassland garden memorialises an ecosystem that still thrives in the midst of the city's concrete jungle. The spectacle of everyday life is framed by each belvedere overlooking the city life. Green spaces, sun decks, event spaces and amphitheatres all give exiting opportunities for the dweller to experience the city from a different point of view.

The relevance of this precedent is in understanding how one element can become a catalyst for urban renewal and reinvigorating public life in the city. It is furthermore one concept, a bridge, that becomes a not only a park but a bridge between the city dweller and a part of its city that was previously neglected. The open ended programmes and spaces provide different types of activities and events. The High Line Park brings a character and identity to the sites that it connects by gathering the spaces around it into a coherent whole.

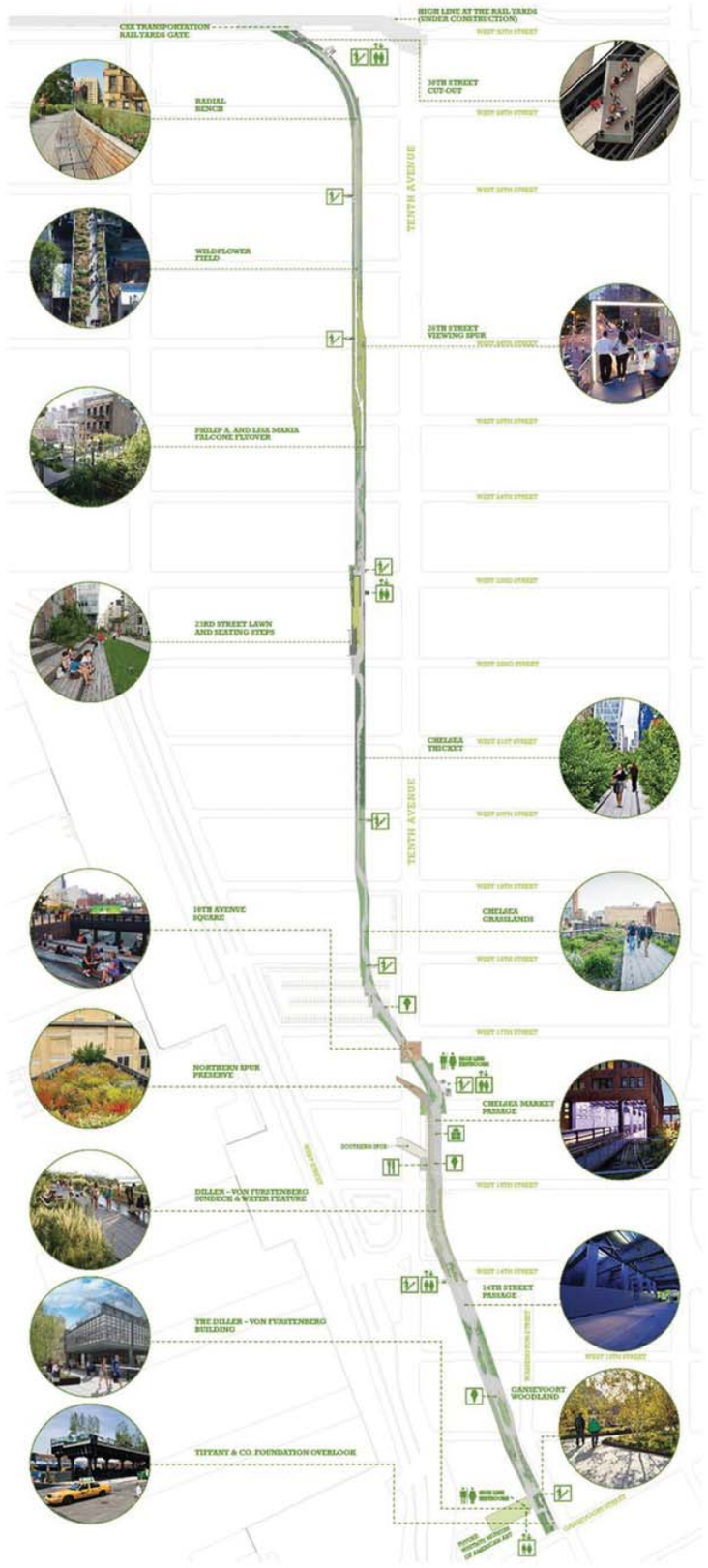
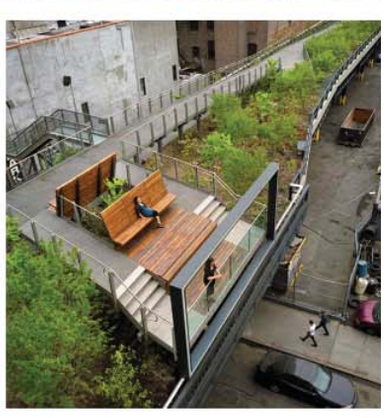


Figure 4.1 - High Line Park.psd ("High Line", n.d.)



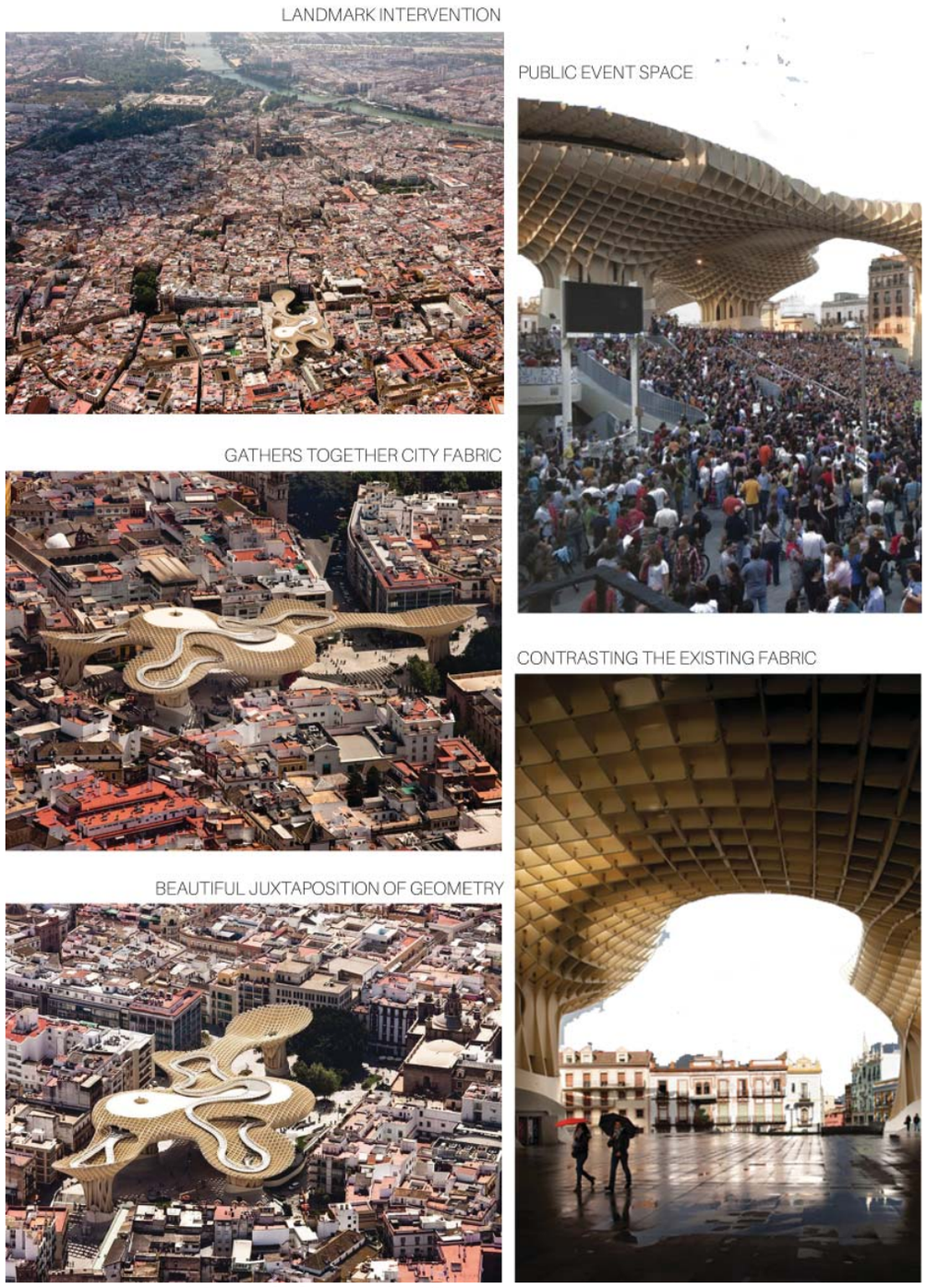


Figure 4.2 ~ Metropol Parasol photos.psd (Zimmer 2011)

METROPOL PARASOL

Location: Seville, Spain
Year of completion: 2011
Architect / designer: J. Mayer H. Architects
Client: City of Seville
Reference: Jordana, 2011

The Metropol Parasol in Seville, Spain is a large undulating timber structure that seems to grow from the old town square like six enormous mushrooms. The old city's building edges give a very strong geometry to the square. The edge contains the square in a rectangle. This made it possible to insert a bold and conflicting intervention that contrasts the existing form and fabric. The square was already defined as a space and could therefore accommodate an "interior" intervention. In this regard it cannot be compared to the site on the corner of Sisulu (Prinsloo) Street and Helen Joseph (Church) Street. The site in Pretoria is an uncontained leftover space with no sense of boundary or control. Creating that edge will be one of the first objectives to get control over that space.

The Metropol Parasol keeps the ground level open in order not to disturb the existing movement patterns and networks. It is also important to keep the views open for a sense of direction and legibility. The "walls" of the square remains the existing building edges. It is only the roof and the floor that changes. Above ground the Parasol becomes a rooftop walkway with a restaurant and ablutions. Underground it exposes the layers of history of the city by means of exposing the archaeological findings of the old city ruins. This treatment of a public space by acknowledging its character and exposing its hidden appeal is very relevant to the site in question in Pretoria. The site of intervention has many hidden narratives that are currently not exposed. Moreover, the site is ideal for a structure that will define it as a contained space.

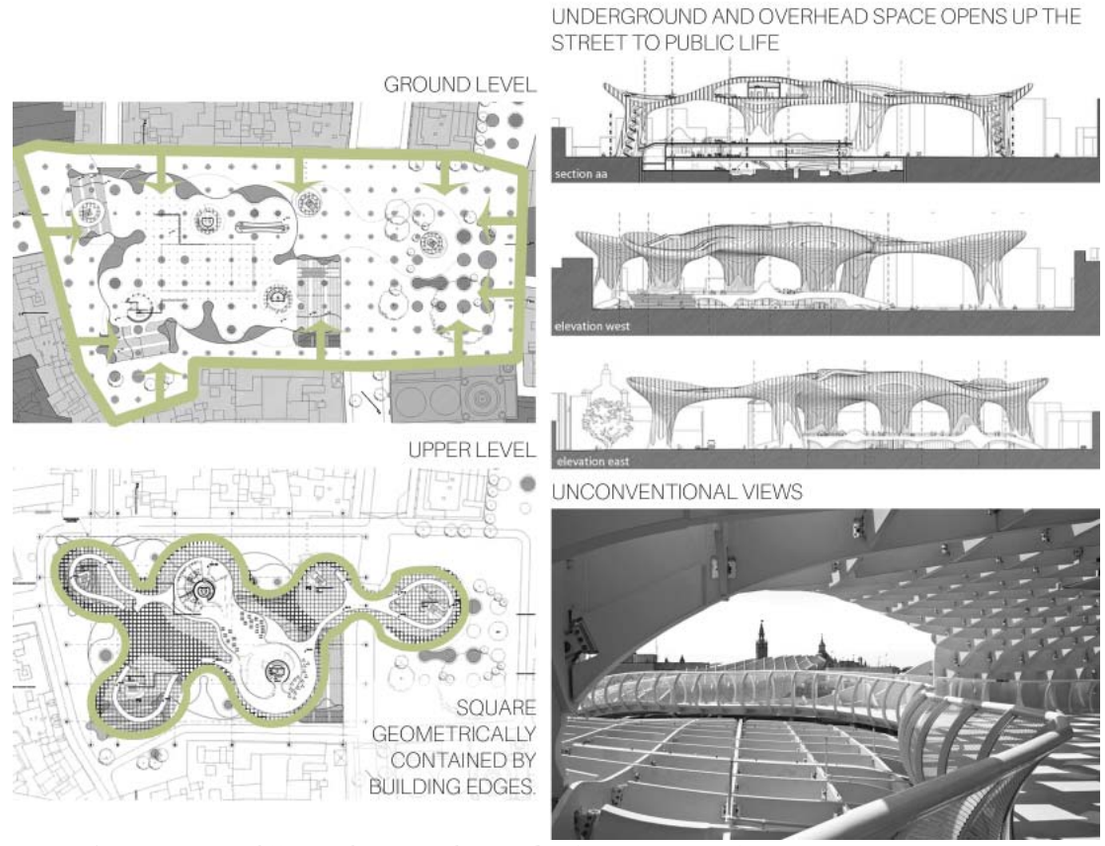


Figure 4.3 ~ Metropol Parasol site analysis.psd (Zimmer 2011)

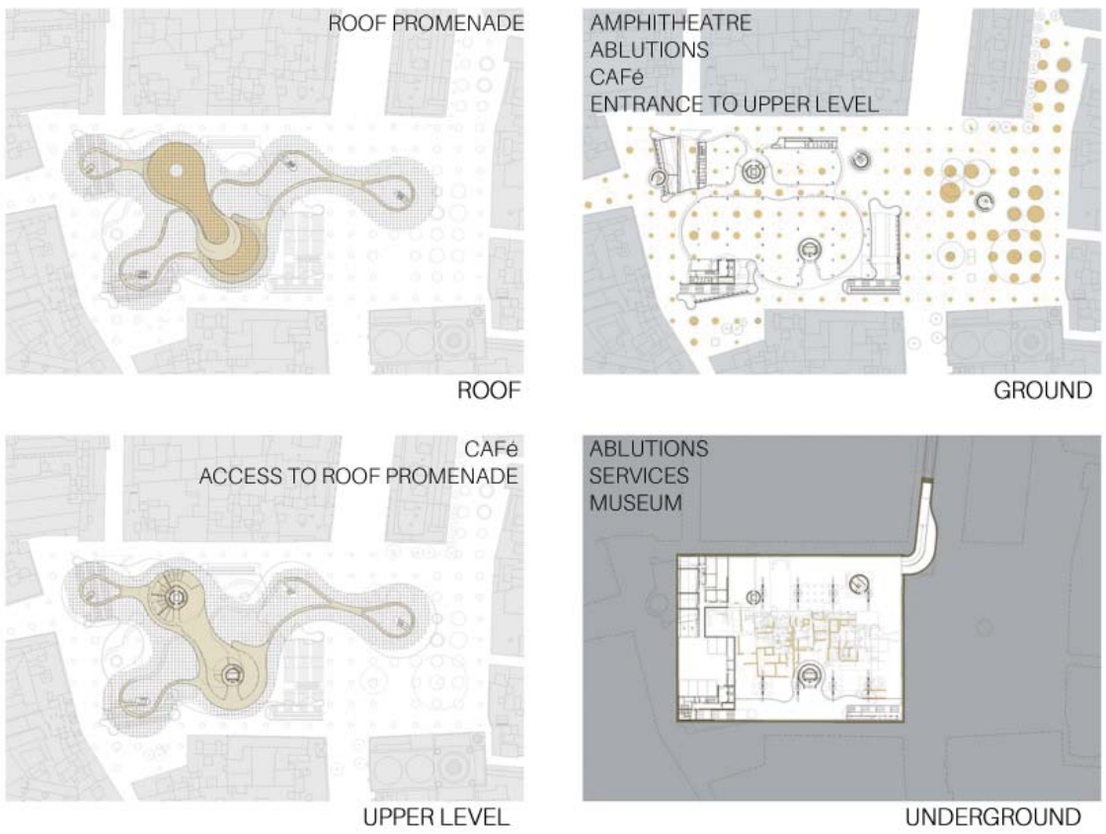


Figure 4.4 ~ Metropol Parasol floor plans.psd (Zimmer 2011)

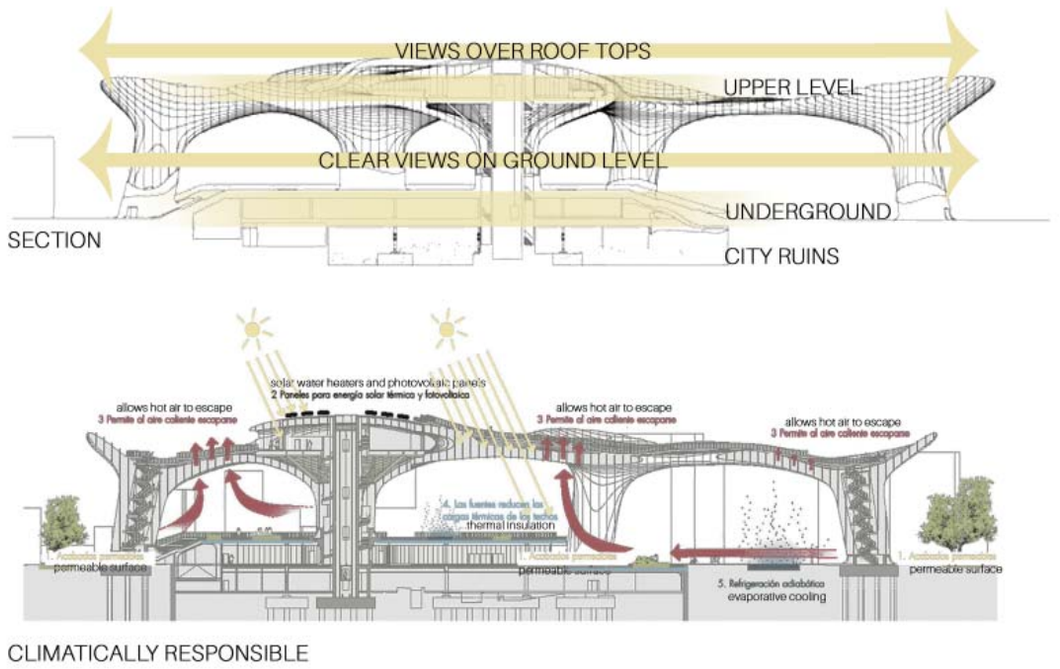


Figure 4.5 ~ Metropol Parasol sections.psd (Zimmer 2011)

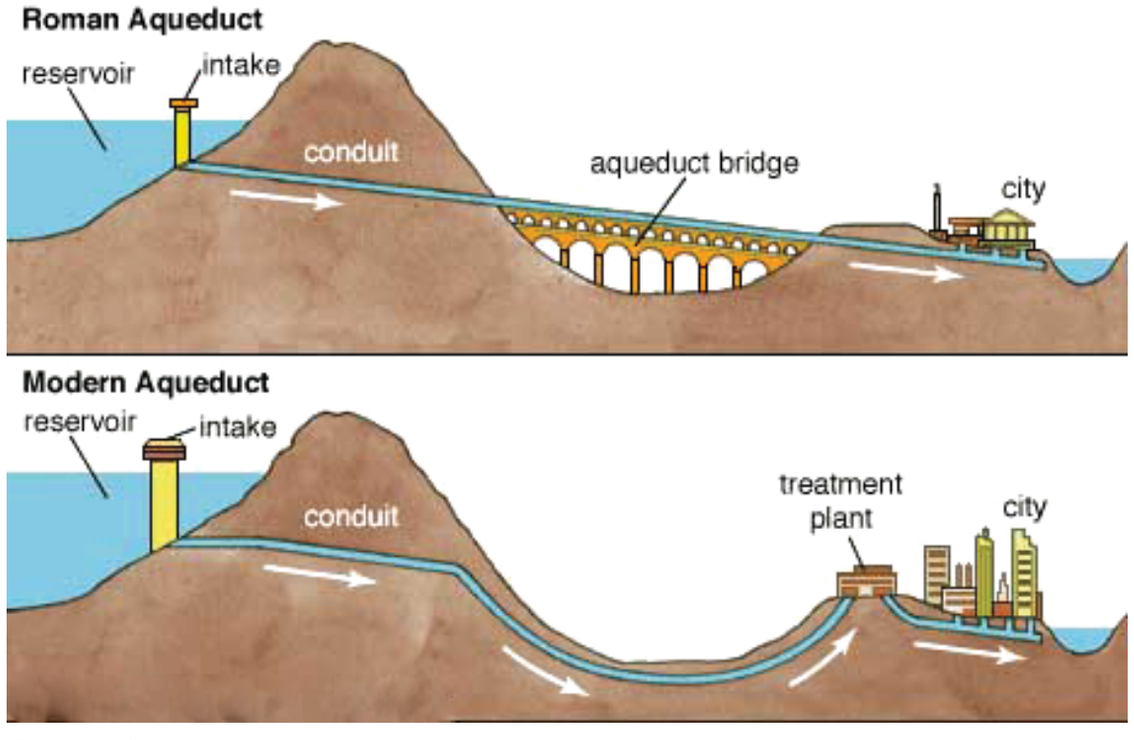


Figure 4.6 ~ Roman aqueduct versus modern aqueduct.psd (Ancient Roman Aqueducts n.d.)

TRADITIONAL ROMAN AQUEDUCT

The word aqueduct is derived from the Latin words aqua, meaning "water" and duct, meaning "to lead" ("Ancient Roman Aqueducts" n.d.). It is therefore a conduit that carries water from the point of source to the point of need. In modern engineering the term aqueduct is used to describe any system or structure with the purpose of carrying water, be it pipes, channels, ditches, gullies or canals.

The structure and function of the ancient aqueducts were studied as a precedent for two reasons. First, programmatically the proposed design becomes a conduit for water. It carries water from the municipal supply to the user. It carries rainwater from the roofs to storage and filtration systems. Moreover, metaphysically, it carries the memory of the water furrows – Pretoria's own aqueducts. Secondly, structurally aqueducts are tall stone structures that became landmarks in old Roman empires. They elevate water, both physically, to transport it, but also metaphysically by articulating its course and exposing the structure that carries the water. In the proposed design the structure also physically become the conduit between the public and water. Furthermore the pipes that carry the water to and from the ablutions will be exposed where it runs in the steel structure. The steel structure becomes the conduit for the water just like the ancient stone aqueducts become the conduit for water.

TRADITIONAL ROMAN BATHS

The traditional Roman bath house is synonymous with the study of civilised urban public life. It was the ancient space of meeting, exchanging gossip, settling business deals and debating the political situation of the day (Cannon 2015). It can therefore also be seen as a space were you not only became naked in a literal sense, but where you also exposed yourself figuratively, by sharing your ideas, thoughts and narratives.

Pretoria is a cosmopolitan city of many cultures. Roman baths, even though the programme is not indigenous, supplies strong evidence of how public to semi-private gateways were treated and how men and woman reserved their privacy in their ablutions.

The relevance of studying the Roman bath house for this project is firstly because of its public nature. The intention of the project is to create a public space that links the existing programmes to each other, but also, on its own, augments the existing programmes. Public ablutions are crucial in the CBD of Pretoria. Considering the fact that many people travel far on foot and on congested transport, a facility that offers the service of public showers and toilets will benefit them. Furthermore, the influence of the clinic and the importance of hygiene in preventing contagious diseases might strengthen the significance of public ablutions.

The bathhouse was analysed in terms of its vicinity in the city. It plan it is clear that it is tucked in behind public commercial street lined shops. Yet it has multiple entrances leading deep into the centre of the urban square. The long threshold already indicates you are entering a less public space. Inside, the space opens up to form a public atrium where initial meeting, greeting and acclimatising takes place. From the main atrium the men and women will divert - if they do not have separate outdoor entrances. For both sexes a portico will lead from the atrium to the dressing rooms, from where passages will lead to the different baths. Traditionally they will first enter the cold bath after which they will move across to the warm room (for acclimatising) to the hot baths. The hot baths are then followed by the wet and dry steam rooms. This understanding will help guide the design of public ablutions in the inner city.

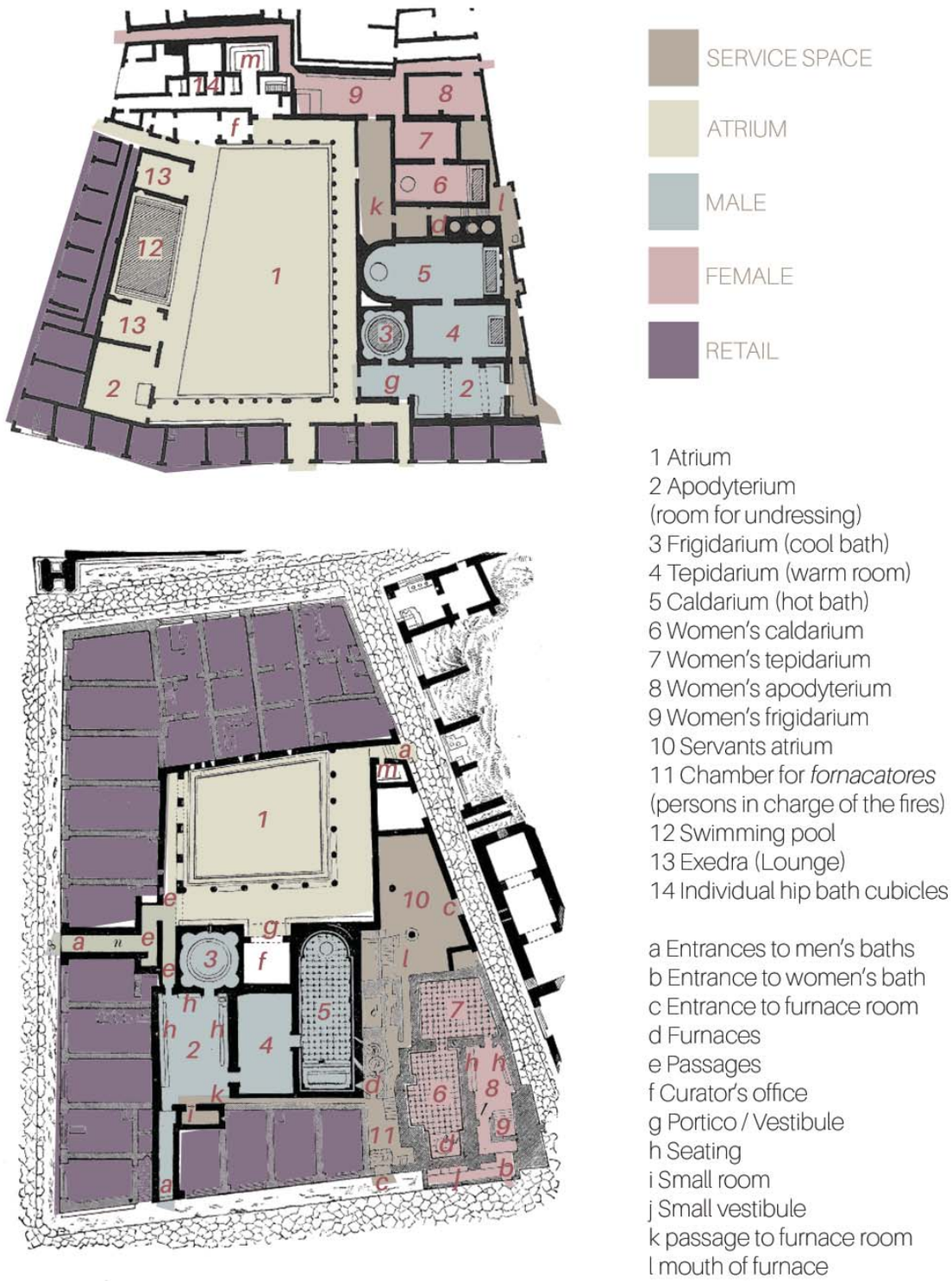


Figure 4.7 ~ Traditional Roman bath house.psd (Cannon 2015)

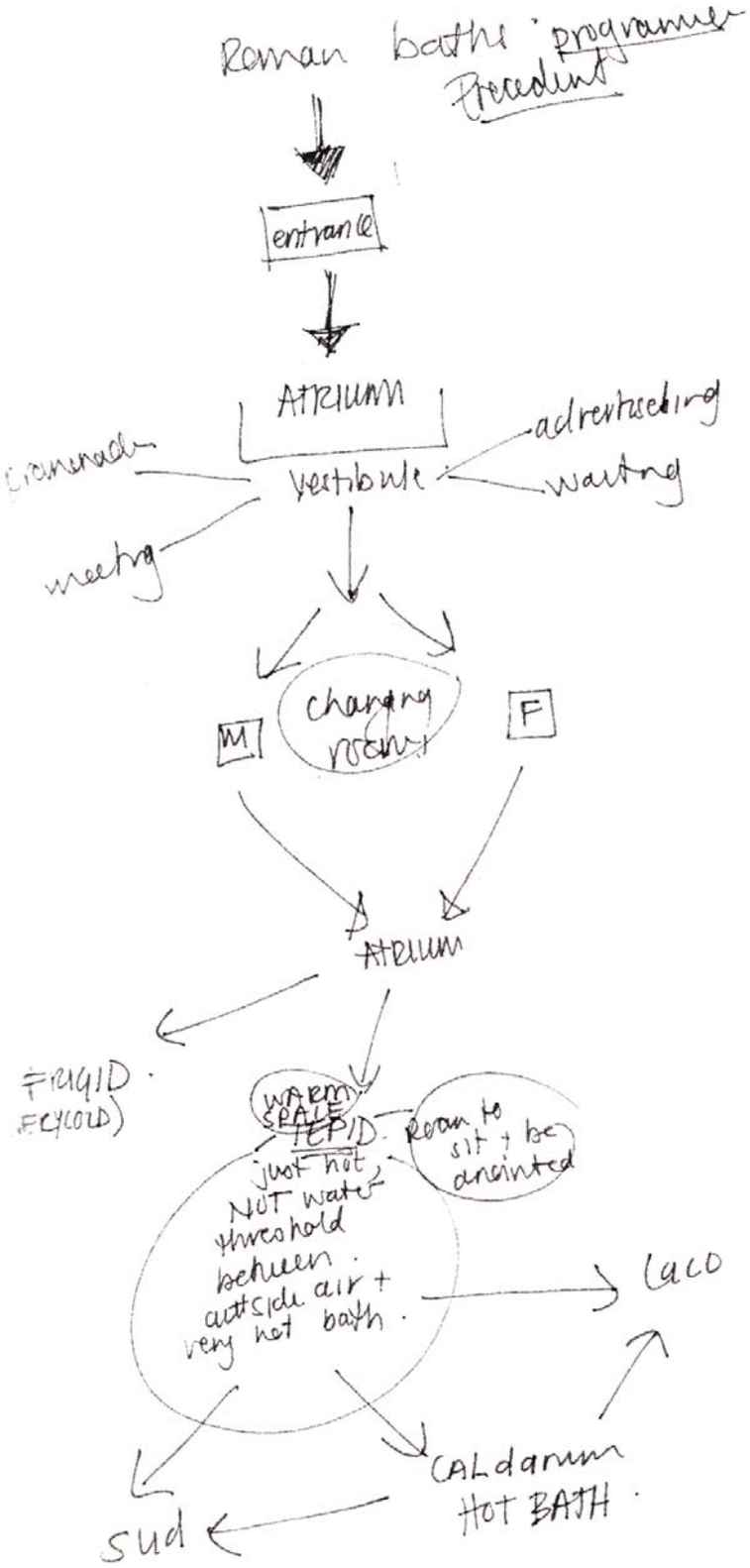


Figure 4.8 ~ Programmatic diagram of Roman bath house.psd

Figure 4.9 ~ Public space under the tree.psd

TRADITIONAL AFRICAN PUBLIC SPACE

In the traditional African village the public space is simply a central open piece of land, usually under a large tree that gives shade. Over time mats, benches and chairs will find a permanent place under the tree. And that is where the community will start to gather when they want to discuss, celebrate, debate and gossip. As Francis Kéré explained, "normally, in the village, public space is an open space. People gather under a large tree and talk" (Picchi 2010).

The public space in an African village has a different sense of ownership than the public space in a cosmopolitan city. The public space under a tree is really the property of that community and is limited to that specific culture. In the CBD of Pretoria with limited residential developments, the public space belongs to anyone who occupies the space any time of the day, week or year. The community will consist of commuters who walk the same way from the transport terminal to the city. It will consist of people working in the surrounding buildings, students studying in the nearby colleges, or visitors to the functions surrounding the site. It must therefore be the "open space under the tree" for a number of different communities, providing opportunities for meeting, gathering and socialising.

"So much of design is context". ~ Steve Madden

"Always design a thing by considering it in its next larger context – a chair in a room, a room in a house, a house in an environment, an environment in a city plan." ~ Eliel & Eero Saarinen

CHAPTER 5

SITE CONDITIONS

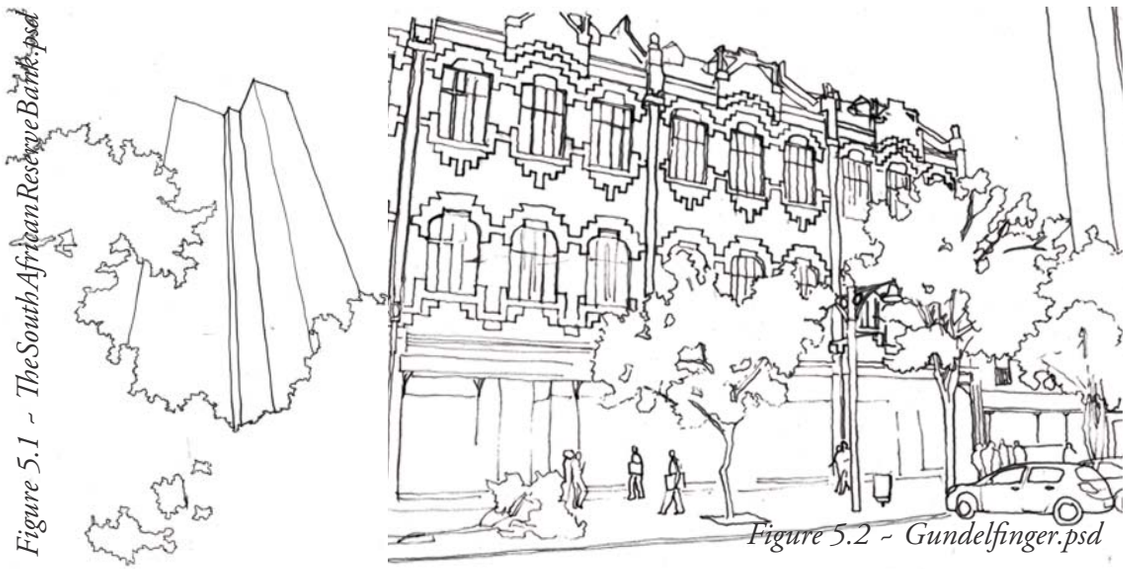


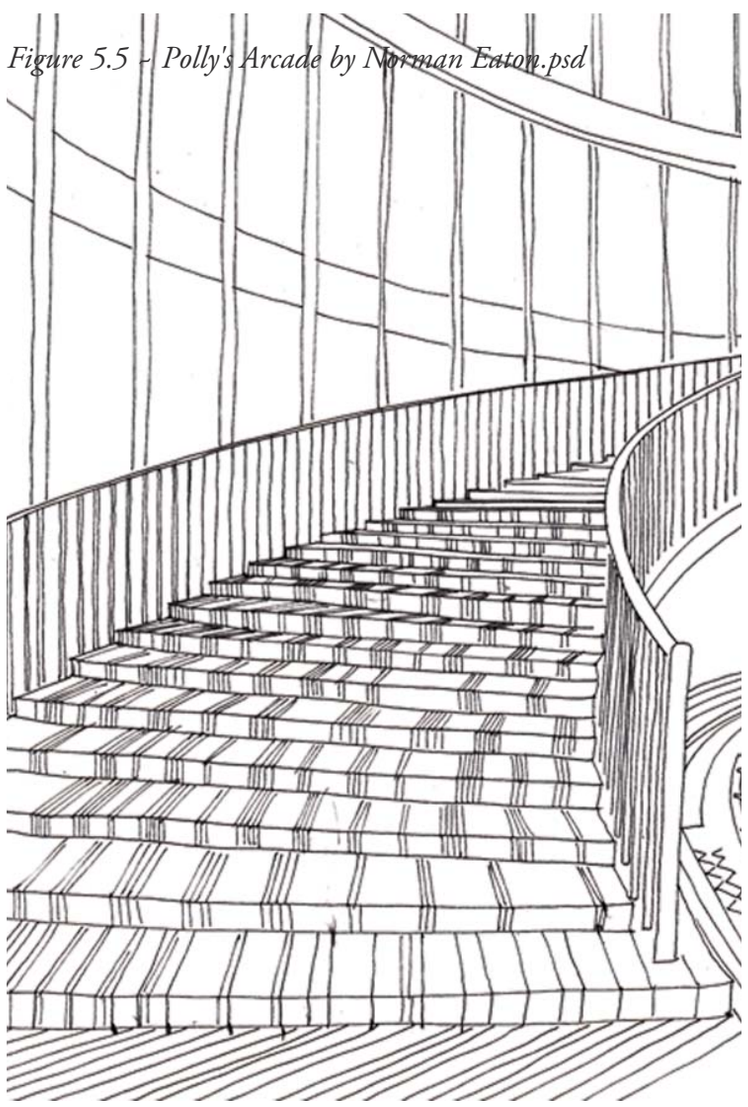
Figure 5.1 ~ TheSouthAfricanReserveBank.psd

Figure 5.2 ~ Gundelfinger.psd

Figure 5.3 ~ Urban forest.psd

Figure 5.4 ~ The State Theatre.psd

Figure 5.5 ~ Polly's Arcade by Norman Eaton.psd



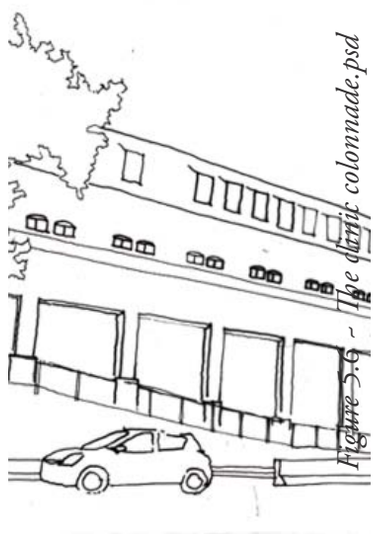


Figure 5.6 ~ The dutch colonnade.psd

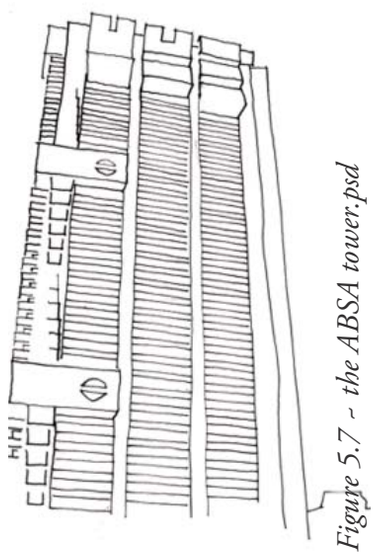


Figure 5.7 ~ the ABSA tower.psd

Figure 5.8 ~ Activities on site.psd

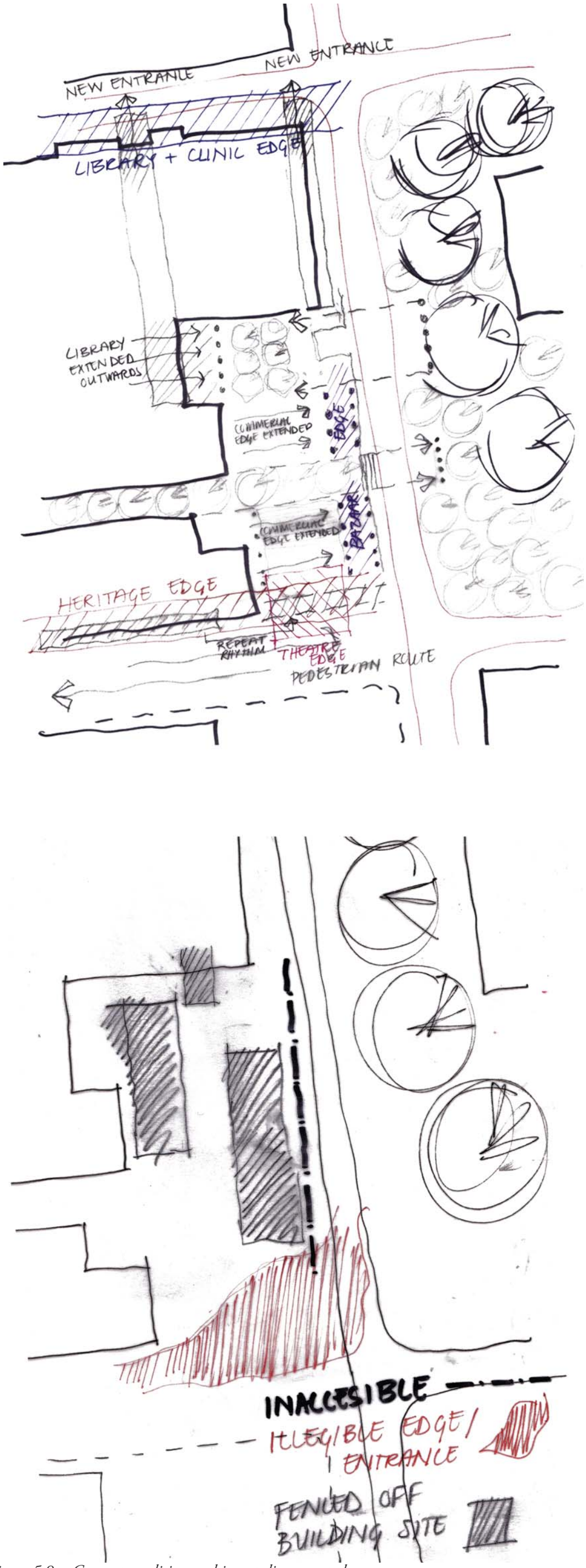


Figure 5.9 ~ Current condition and intent diagrams.psd

No good design can exist in isolation. Unlike much of the existing architecture in Pretoria's inner city the aim of this design is to be contextual, sensitive, appropriate and relevant. To achieve this objective, a very good understanding of the site and its conditions is necessary.

In this chapter the historic conditions will be unpacked first. Thereafter, the existing programmes and their affect will be discussed. The actual built conditions and how it influences the site will be followed by a discussion on the material conditions. Then the circulation on site will be studied ending with a discussion on how the climate influences the site.

HISTORIC CONDITIONS

The main historic conditions on site includes the Asiatic Bazaar, the old water furrows, the tragic shooting by Barend Strydom and the watershed woman's march of 1952.

The area around Sisulu (Prinsloo) Street used to be a vibrant space with an established Indian community. It was a pleasant and intimate area rich in diverse cultures and a history as old as Pretoria.

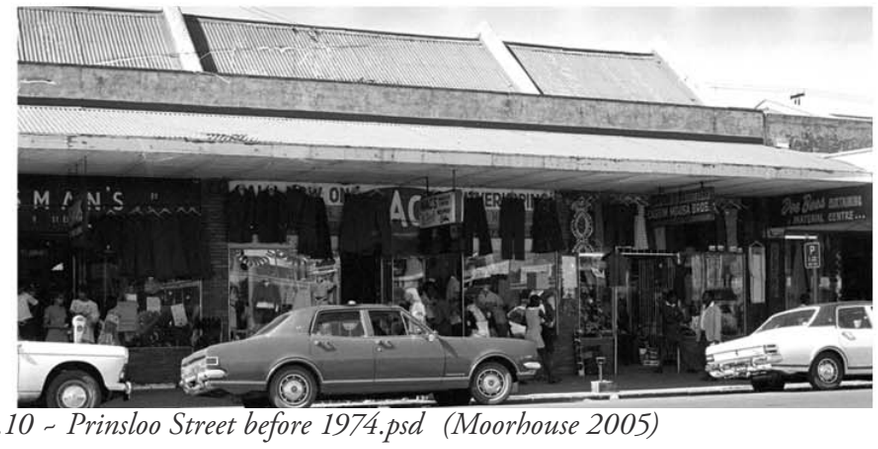


Figure 5.10 ~ Prinsloo Street before 1974.psd (Moorhouse 2005)

The Asiatic Bazaar

During the 1870s-1880s an influx of Indians settled in Pretoria on Lilian Ngoyi (Van der Walt) Street and Sisulu (Prinsloo) Street between Helen Joseph (Church) Street and Vermeulen (Madiba) Street (Jaffer 2012). This was in part due to increased hostility towards them in Natal (Jaffer 2012) and also following the burgeoning mining industry (Naidoo 2008).

The Indian traders were more successful with the local burghers who mostly consisted of simple farmers who were not under British rule (Jaffer 2012). The Indian trader charged less than the European traders (Jaffer 2012). Competition between the Indian and European traders caused the European traders to campaign against the Indian traders (Naidoo 2008). This led to the Law 3 of 1885 that imposed many restrictions on the movement, trade access and land procurement on the Indian people (Naidoo 2008).

Due to the Second Boer War (1899-1902) and the commencement of the new British Government this law was not strictly implemented until the Group Areas Act of 1950, 1957 and 1966 (Naidoo 2008). At the height of the implementation of the Group Areas Act, the South African government started large scale building projects to modernise Pretoria inner city. This further contributed to the evacuation of the Indian trade and residents of Sisulu (Prinsloo) Street.

Photos were taken by Lynn Moorhouse, of Sisulu (Prinsloo) Street before 1974. Only a few months later the Group Areas Act forced the last of the residents and their businesses to relocate.

From these photos we gather that the area around Sisulu (Prinsloo) Street used to be a vibrant space with an established Indian community. It was a pleasant and intimate area rich in diverse cultures and a history as old as Pretoria. If the Burra Charter existed in 1950, this could have been protected as a place of significance for the history of both Pretoria and the Indian community of Pretoria. The architecture could have been protected as having significance for both the memory of Pretoria and the Indian community of Pretoria (Burra Charter 2013).

Sisulu (Prinsloo) Street today especially on the corner of Helen Joseph (Church) Street, seems to have been forgotten. A large part of it is behind fences due to unfinished construction work. Its connection to public services like the library and clinic, as well as retail, makes it ideal for a vibrant public space. A space that might celebrate the Sisulu (Prinsloo) Street of the previous century. The proposed design hopes to not only augment the current programmes around the site, but also to support opportunities for small businesses and in doing that, hopefully a sense of the old vibrant Prinsloo Street can be recreated.

	R.P. in E. Store	R.P. in I. Store	Quantity
Coffee	2s 0d	1s 2d	lb.
Tea	4s 0d	2s 6d	lb.
Cheese	2s 3d	1s 0d	lb.
Candles	2s 0d	1s 0d	pkt.
Tin Milk	1s 6d	1s 0d	tin
Sardines	2s 0d	1s 0d	tin
Sardines	1s 0d	6d	tin
Matches	1s 0d	6d	box
Rice	9d	4d	lb.
White Sugar	1s 0d	6d	lb.

Figure 5.11 ~ Price differences.psd (Jaffer 2012)

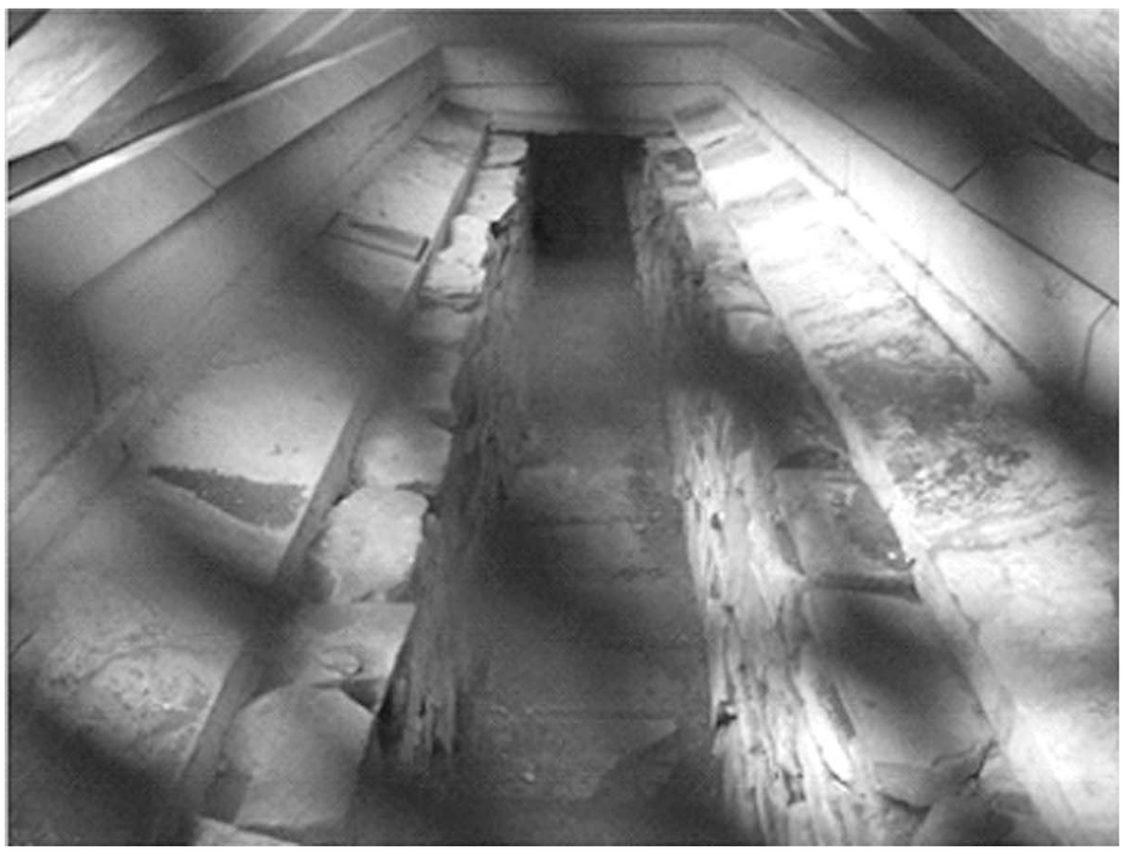


Figure 5.12 ~ Water furrows.psd
Inscription on the copper plaque:
"Water furrow (± 1860)
One of the oldest relics of Pretoria's pioneering years. From 1860 to 1910 water from the Fountains was supplied to the central part of Pretoria by means of a network of furrows. The furrows were covered with slate by approximately 1885, later with earth and finally with paving. They were used as storm water channels until the 1940s"

Water furrows

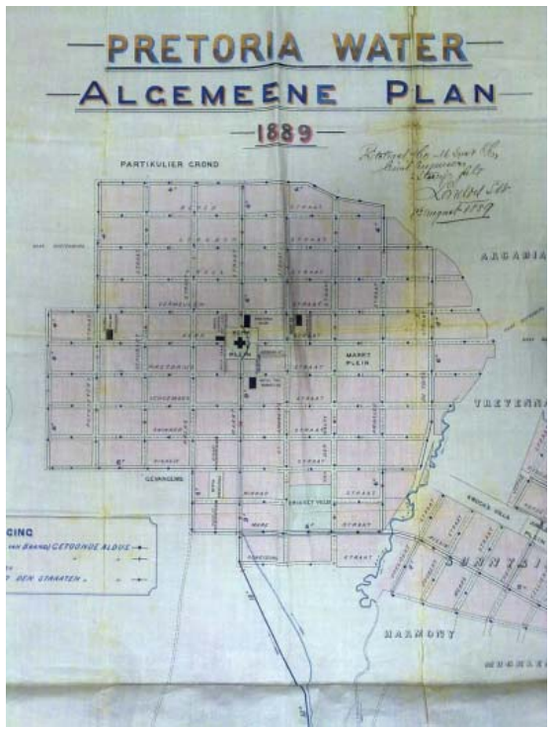


Figure 5.13 ~ Pretoria water plan 1889.psd (Van der Walt 2012)

In 1855 the first water furrow and holding dam was built at the Pretoria fountains (Dippenaar 2013:20). By 1863 the Zuid-Afrikaanse Repuliek (ZAR) had purchased the fountains in the valley from the Bronkhorst Bros, in order to distribute water to the town of Pretoria (Dippenaar 2013:20). With the increase of the population the furrows in town became infected and spread typhoid, cholera and enteric fever. This caused the furrows to be abandoned by 1877 and cast iron pipes to be laid instead (Dippenaar 2013:21). In 1900 when Pretoria was under British rule, the military controlled the distribution of the water (Dippenaar 2013:25). Water metering was only introduced in 1920 (Dippenaar 2013:30). Today the fountains are still used to supplement the city's water with clean spring water. The fountains discharge 40million litres per day (Dippenaar 2013:34).

Remnants of the old furrows are still buried under the pavements of the city. One of these furrows is exposed for viewing in front of the State Theatre.

Very few people know about this rich historical layer under the city pavements of Pretoria. Apart from this one small piece of exposed furrow there is no integration of this historical narrative in either the physical city or the programmes on the streets. If one considers the Historic Landscape approach

Remnants of the old furrows are still buried under the pavements of the city.

by Bandarin and Van Oers, a myriad of urban and public opportunities can be generated by reintroducing the essence of what the furrows were into the contemporary city.

The definition of a Historic Urban Landscape (HUL) is,

> *"An urban settlement understood as a historic layering of cultural and natural values, extending beyond the notion of 'historic centre' of 'ensemble' to include the broader urban context and its geographical setting. This wider context includes … its infrastructure above and below ground" (Bandarin & Van Oers 2014).*

In a city with a politically contested history, water and access to water became one of the tools used to confirm power. The privately owned Bronkhorst Bros in all probability started the distribution of water to supply the farms with water when the Apies River ran dry in the winter. When the ZAR founded the first government they took over the management of the water distribution. (Dippenaar 2013:21) In 1900, the British military took over the control of the water distribution (Dippenaar 2013:25). During apartheid non-whites where not allowed to use public ablutions in the city and very few of the public ablutions had facilities for non-whites. (Nothnagel 2015) In this way access to water and sanitation was controlled and at times withheld from a large portion of Pretoria's inhabitants. The way in which the furrows and water are remembered and treated can be a statement to undermine its historic political role.

Barend Strydom

On 15 November 1988, 23-year old Barend Strydom parked his car in Sisulu (Prinsloo) Street and walked to Strijdom Square shooting people with his pistol as he walked. He walked to Strijdom Square and back to Prinsloo Street, turning north towards Struben Street. (The 1988 Square Massacre 2001). He shot 24 people and killed seven ("Barend Strydom" 2015).

This very brutal side of the history of Pretoria and its significance for the site is currently completely disregarded and forgotten. The seven victims of Strydom's massacre are unrecognized and forgotten by everyone except their families.

Due to the fact that the incident happened right on the design site, some form of recognition must be given the victims of this tragic shooting. A competition can be launched for an art installation that will memorialise the victims. Local artists can compete. In this way a broader group of people will be exposed to the narrative.

The seven victims of Strydom's massacre are unrecognized and forgotten by everyone.

Women's March

In 1952, Act no.67 forced black women to also carry a reference book, previously a pass book, only carried by black men (O'Malley, n.d.). This book served as a passport indicating when they were supposed to be where. It limited their movement based on where they worked and lived. The Act was however not enforced until 1954 (Anonymous, 2011). On 9 August 1956, 20 000 women lead by Lilian Ngoyi, Helen Joseph, Rahima Moosa and Sophie Williams marched from Strijdom Square to the Union Buildings. They carried thousands of petitions to the J.G. Strijdom administration apposing this Act.

It is very significant that the same Strjidom Square where the march congregated is now the site of the new Women's Memorial, honouring the four women who lead the march. Once it was a symbol of national pride, freedom from British rule and independence of the Afrikaner government. Now it is the symbol of woman's pride, freedom from the apartheid rule and independence for the black woman. Neither in the 1960s nor now does it address the whole of society or even acknowledge the layered history of the site. Like a slate wiped clean it only propagates the existing historical bias.

Figure 5.14 - Women's March leaders.psd (New street names in the CBD 2015)
Rahima Moosa, Lilian Ngoyi, Helen Joseph and Sophie Williams at the Union Building

Figure 5.15 - New women's memorial.psd (Fourie 2014)

Wathint'abafazi, wathint'imbokodo!
(Now you have touched the women, you have struck a rock.)

PROGRAMMATIC CONDITIONS

The library, clinic, theatre and retail programmes will form the programmatic basis of the design's own programmes. The new intervention aims to augment the existing programmes. These will be discussed in terms of how they can drive the design.

Library

The Es'kia Mphahlele Library is situated inside the new Sammy Marks Building. It is a meeting place for students from the many colleges in the area, a sanctuary for working people over lunch time and for many it is the only way to access information, whether by internet or print media and other publications. It is a safe haven for mothers with no childcare over school holidays, because they offer holiday programmes. This gives it a prominent role in the life of the single parent. There is however no signage to indicate the presence of this library and the entrance is hidden, uninviting and unobtrusive. It has no visual or physical interaction with the city. It cannot be stumbled upon. Unless you know of the existence of the library you can live and work in the area and never know of its existence.

Its lack of interaction with the public, the lace of visibility and its unobtrusiveness needs to be addressed. The design solution for this is to open the library up to the public, where it can be stumbled upon and to make the entrance more visible in the city. A new entrance is proposed on the northern façade, with the eastern façade opening onto the square to extend the existing coffee bar to the outside.

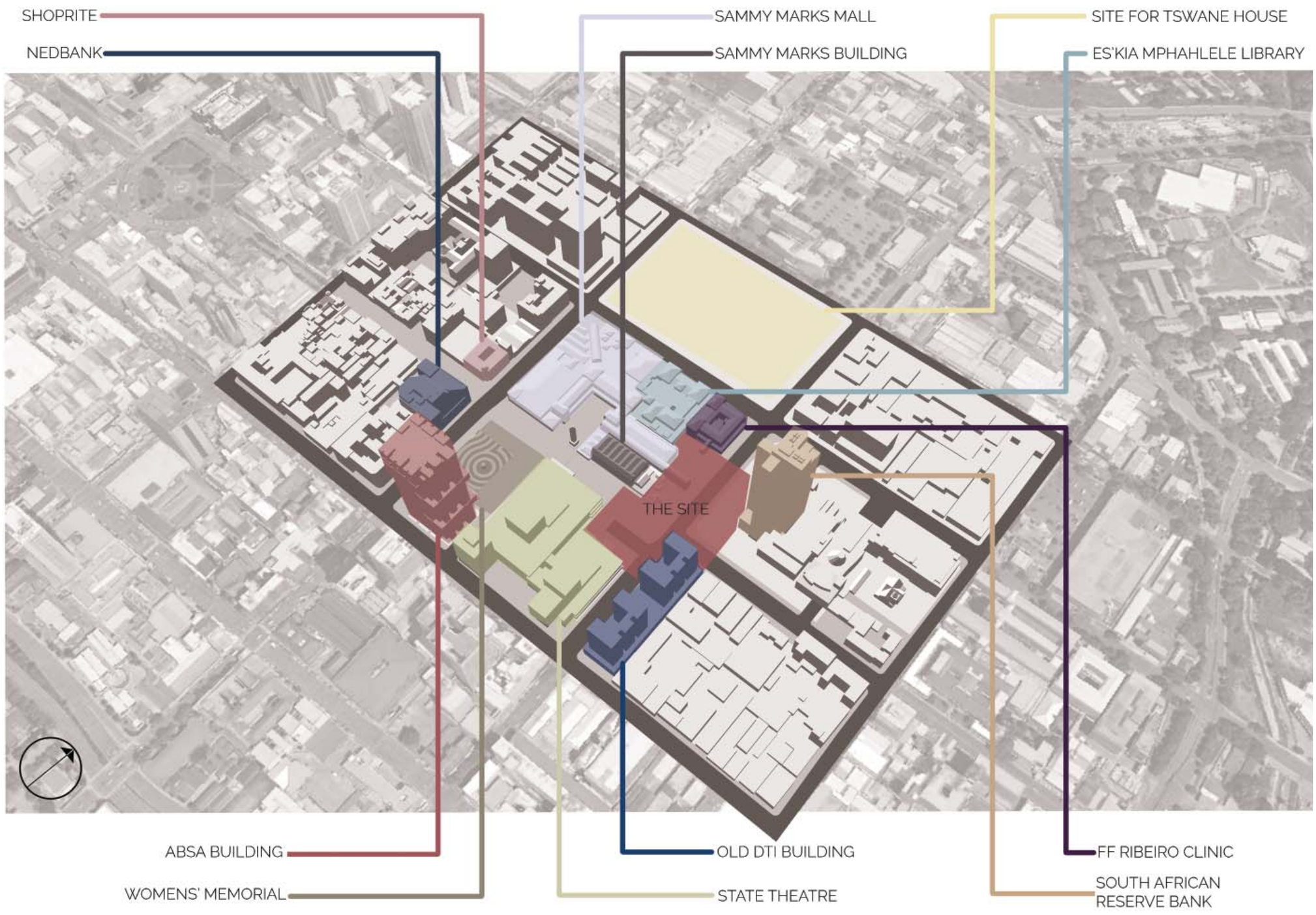
Clinic

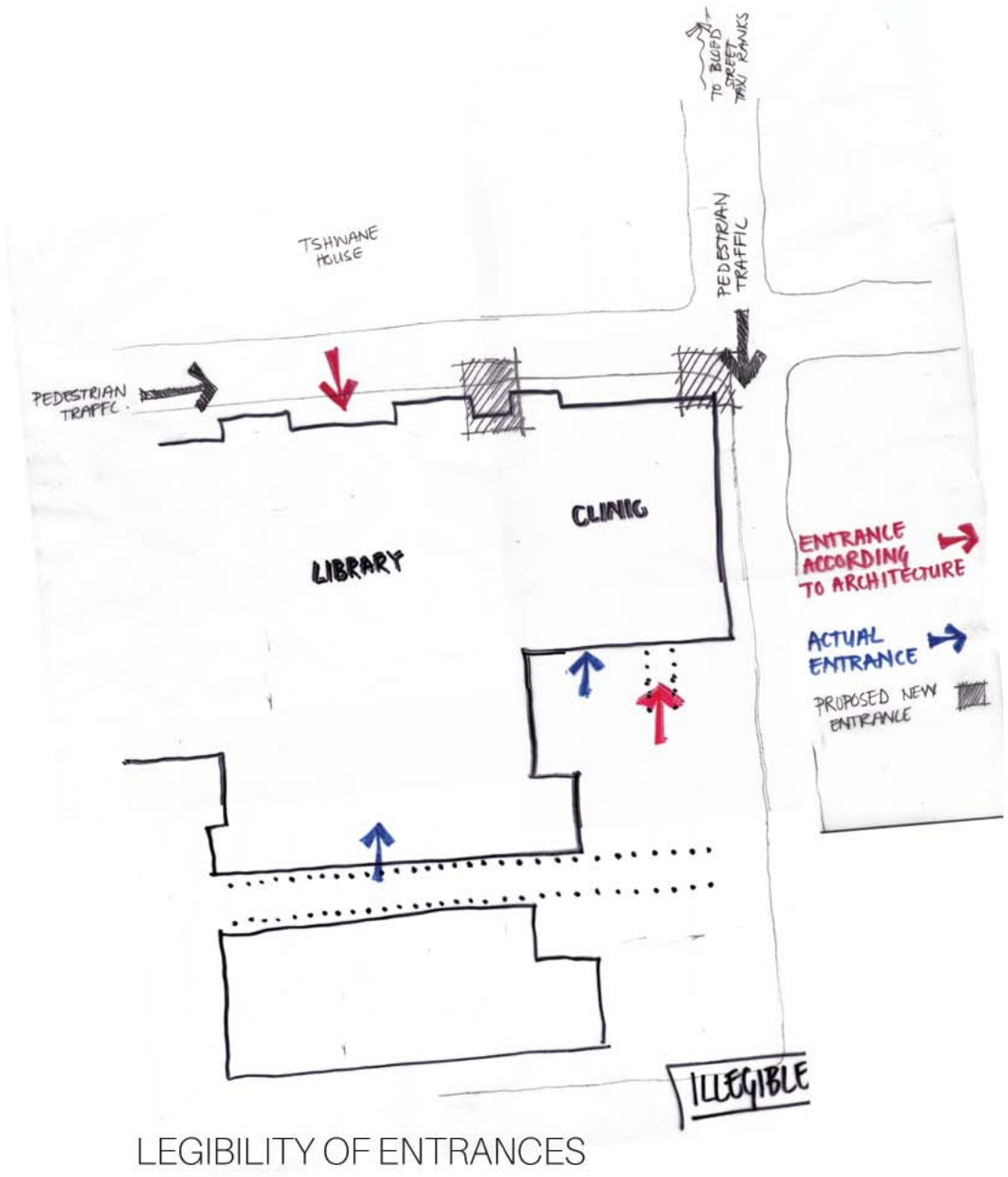
The FF Ribeiro Clinic is situated in the new Sammy Marks buildings next to the library. The focus of the clinic is on the improved health and well-being of the local community. Their services include HIV, AIDS and TB-related treatment, care and support. Being a primary health care facility, it serves fortified porridge to underweight patients, it offers treatment on opportunistic infections and it provides maternity and pregnancy support. (FF Ribeiro Clinic, 2014)

The clinic's entrance is obscured from passers-by. And the route to the entrance is undefined due to unfinished construction and protective fencing. The building is right on the street corner of a very busy pedestrian route from the main precinct transport interchange in Bloed Street. It is ideally situated next to other institutional services, namely the library and the municipality, giving it more gravity.

It has the potential to augment the current programmes with healthier waiting rooms, accessible informative meeting space, services for mothers with babies, childcare facilities and public ablutions. The design strategy is to define the entrance towards the north and to augment the current program with semi-outdoor waiting areas, intimate meeting rooms, baby care classes, childcare facilities and public washrooms.

Figure 5.16 ~ Programmes on and around the site.psd





Theatre

The traditional function of the theatre was more for than just entertainment, it was the place where public life happened. It was a place of meeting, of exchanging information, ideas and opinions. The theatre productions were a commentary on life and it was a way through which you could perceive your world in a new way. Most of all it was energetic, engaging and even educating.

The placement of the theatre in this part of the city indicates that the planners understood the legacy of old market square. It also was a place for trade and exchange of ideas, goods and information. The State Theatre did however not succeed in retaining the spirit of the market square. Instead the theatre became a monument to the republic. Its presence is overpowering and out of scale. It only functions during the night and it has no interaction with the city.

The program is however very appropriate and the design intention is that the theatre will be freed from its brutal walls and be allowed to happen outside where it can function as an event space at any time of the day. This will be done by creating an amphitheatre that connects to the State Theatre's underground parking. It will accentuate the urban vision of extending the State Theatre foyer out into the street.

Retail

The new Sammy Marks buildings accommodate various formal retailers. As the historic market space of the city of Pretoria this is an appropriate program for the building. However, all the retailers are large franchised companies, with no direct link to the site. Walking into the Sammy Marks buildings is like walking into any mall anywhere in South Africa. On the edges of Helen Joseph (Church) Street you find informal vendors with fold away tables and canopies that sell goods to the pedestrians. Of these the only vendors with a direct link to the site are the ones selling fruit and vegetables. Many sell similar but cheaper versions of what can be bought in the formal retail stores.

This parallels the history of the early traders in Sisulu Street (Prinsloo Street), where the more affluent European shops sold the same goods as the Indians to the burghers, but at a higher price. In the Sammy Marks building the formal, more expensive, retailers have higher rent to pay than the small rent the vendors need to pay.

The proposed design hopes to bridge this gap by creating smaller more affordable rental spaces that are well designed and permanent fixtures, with services like the formal retail spaces that has access to the pedestrian and the street. However, it will be much more affordable for a local small trader to rent. In this way the small entrepreneur gets the benefits of locality, comfort and quality, as well as it being economically sustainable.

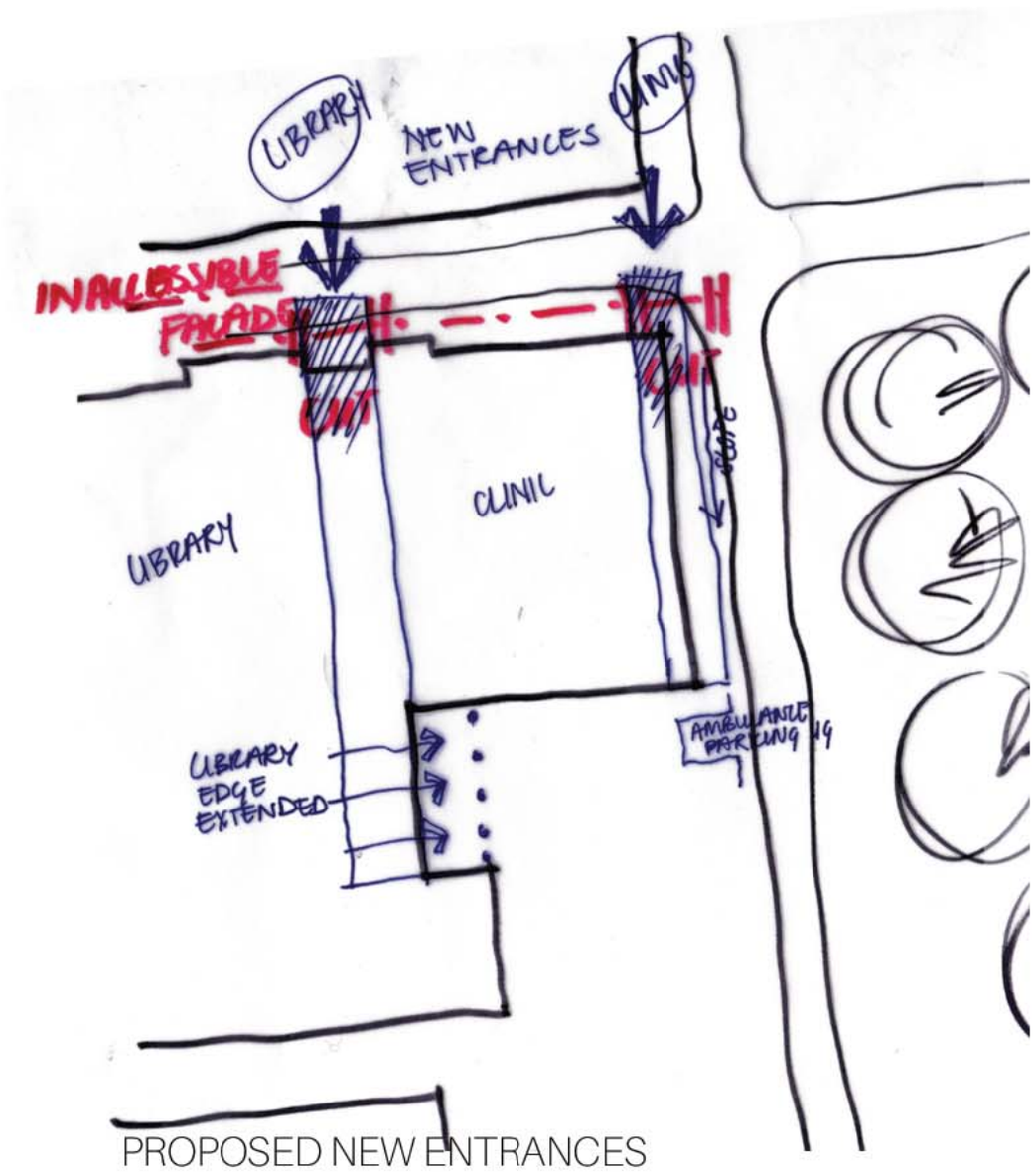


Figure 5.17 ~ Library and clinic analysis.psd

BUILT CONDITIONS

The buildings surrounding the site have a very strong influence on how the site is experienced. The buildings that have direct impact on the site include the State Theatre, the Gundelfinger building, the Sammy Marks buildings, the South African Reserve Bank and the Urban Forest. These buildings interact very specifically with the street edges based on their architecture. The built conditions immediately surrounding and influencing the site are considered here and responses are recommended.

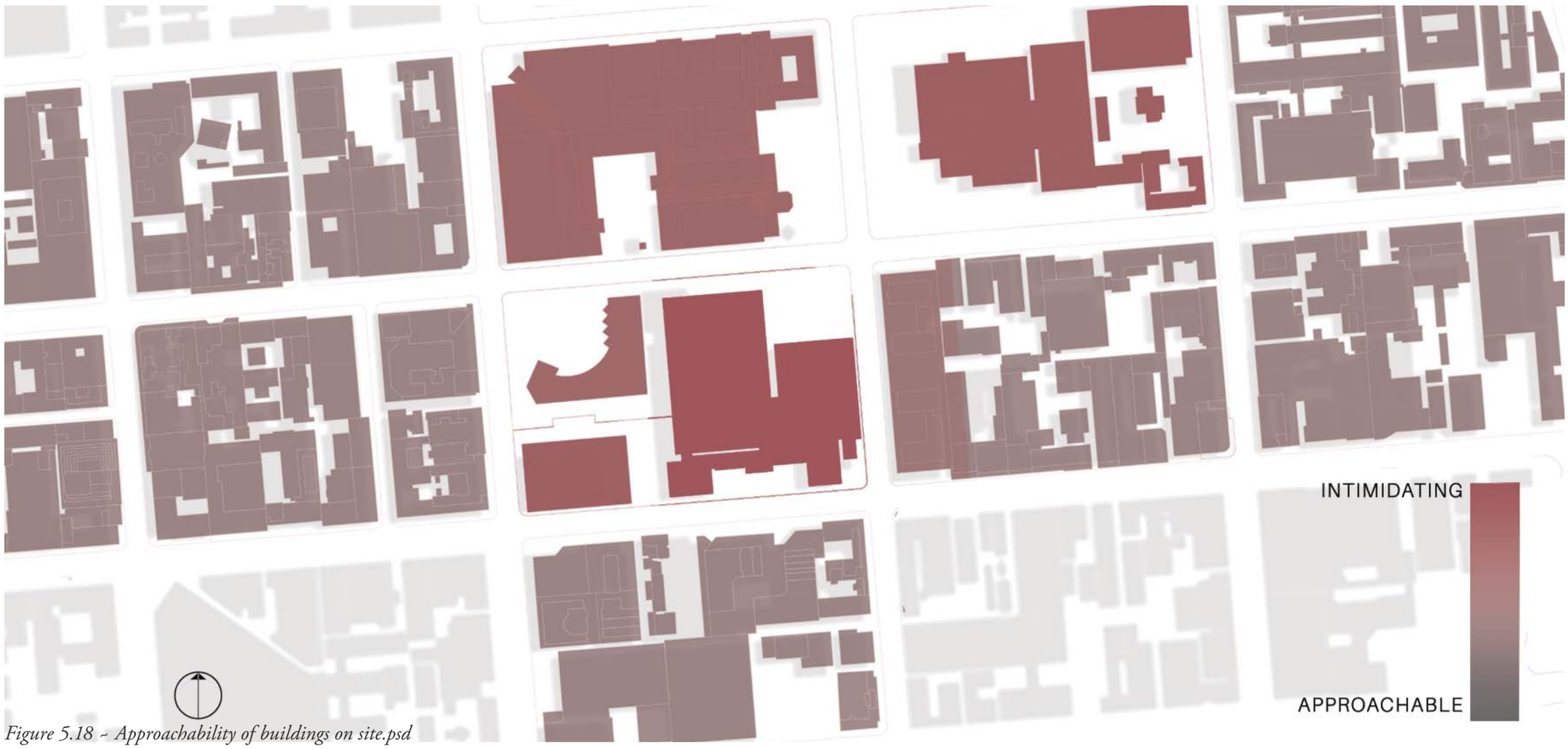


Figure 5.18 ~ Approachability of buildings on site.psd

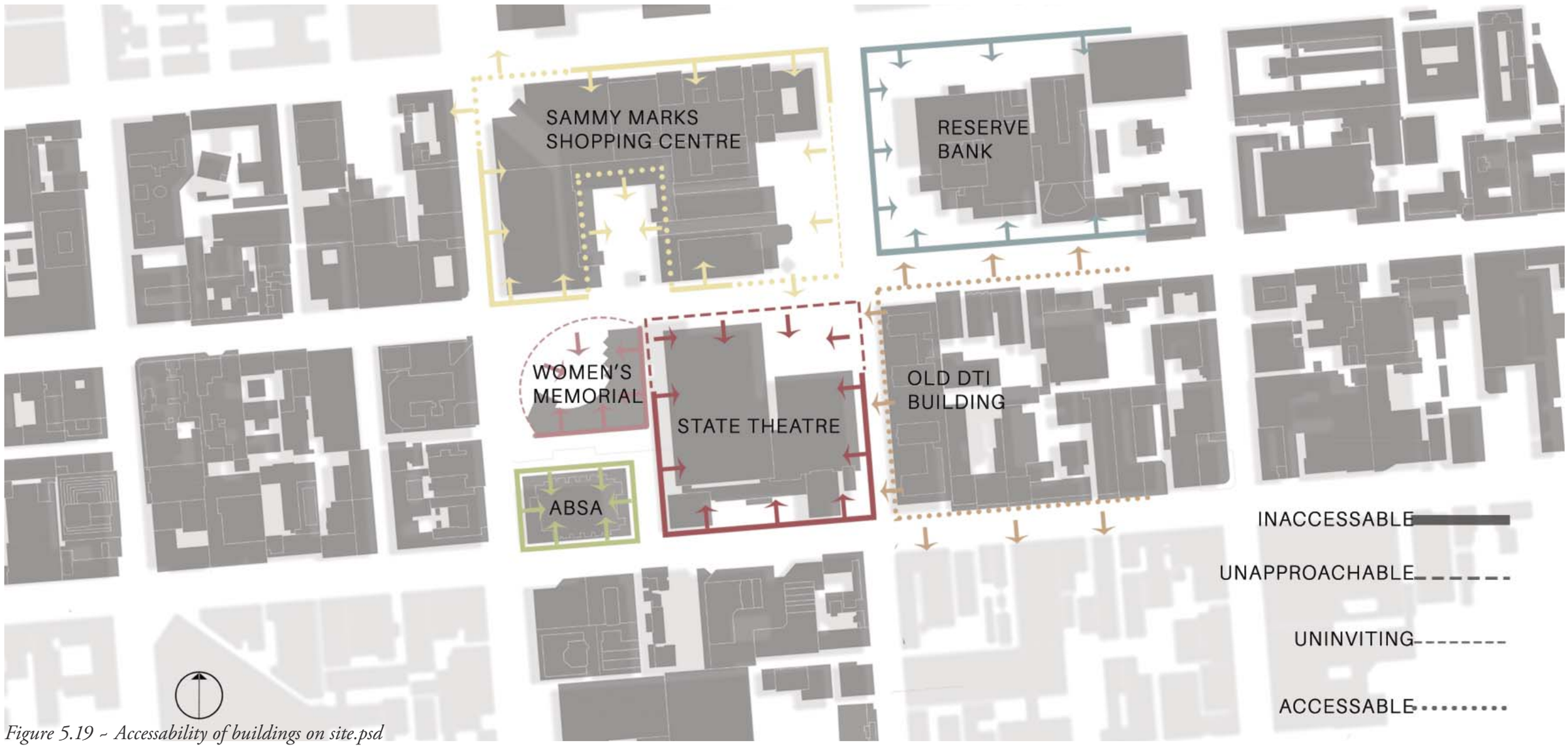


Figure 5.19 ~ Accessability of buildings on site.psd

Figure 5.20 ~ Character study of the Gundelfinger building.psd

Figure 5.21 ~ The Gundelfinger and Kynoch buildings.psd
(Slideshow of Marks Building - Gundelfinger - Metro Cycle House photos 1980)

Gundelfinger and Kynoch buildings

Across from the State Theatre stands the Gundelfinger building, also known as Metro Cycle House. It was built as a commercial property in 1903, by W.J. de Zwaan for Sammy Marks, to serve as an inheritance for his descendants (Bakker, Clarke & Fisher 2014). It is an exquisitely preserved example of the Wilhelmiens architecture of the 1800s (Bakker et al. 2014).

This charming building is beautifully proportioned to celebrate the materials used at the time: red brick and sandstone. It has a glass and cast iron façade on the ground floor with beautifully detailed curved glass thresholds.

GM van der Waal reported the following on the building's significance in the Restorica No 8:16.

- It is probably the only commercial and wholesale building of its kind in both Gauteng and South Africa.
- Historically it has immense significance for art and architecture, because it illustrates a unique building style found in South Africa based on Dutch Wilhelmiens.
- It is the last surviving commercial building in South Africa that consists of a row of identical shops that still functions as separate small shops.
- It was a very significant commercial building at its time.
- It is a landmark in the city.
- It is one of the best preserved, both physically and functionally,

buildings from this period in the history of Pretoria.

- It has a very pleasing aesthetic, a well composed façade and beautiful finishes.

(Marks Building - Gundelfinger - Metro Cycle House, Pretoria n.d.)

To that we might add that it has significance as part of the oeuvre of the architect W.J. de Zwaan. It also gives us insight into the local building practices of the time, both in terms of technique and materials.

The Kynoch building east of the Sammy Marks building is a small double storey structure that dates from before 1889. It was built as an armoury shop for the gunsmith, George Kynoch. The architect is unknown (Kynoch Building, Pretoria n.d.). According to the website, Artefacts, it might be the oldest surviving commercial building in Pretoria (Kynoch Building, Pretoria n.d.).

The Kynoch building has significance in the history of the built environment in Pretoria. Being one of the earliest buildings in the city it should be preserved for future generations.

The design approach to both these buildings are, "do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained" (Burra Charter 2013). The design therefore proposes to strengthen the inherent qualities of the existing buildings by repeating the rhythms of the Sammy Marks building unto the new extension and to use its proportions and composition in the façade design of the new structure.

An exquisitely preserved example of the Wilhelmiens architecture of the 1800s

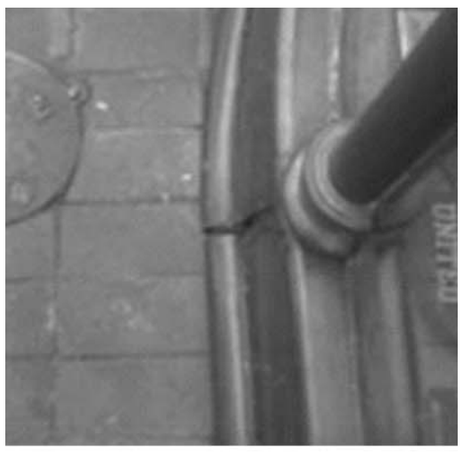


Figure 5.22 ~ Gundelfinger details.psd (Swanepoel 2010)

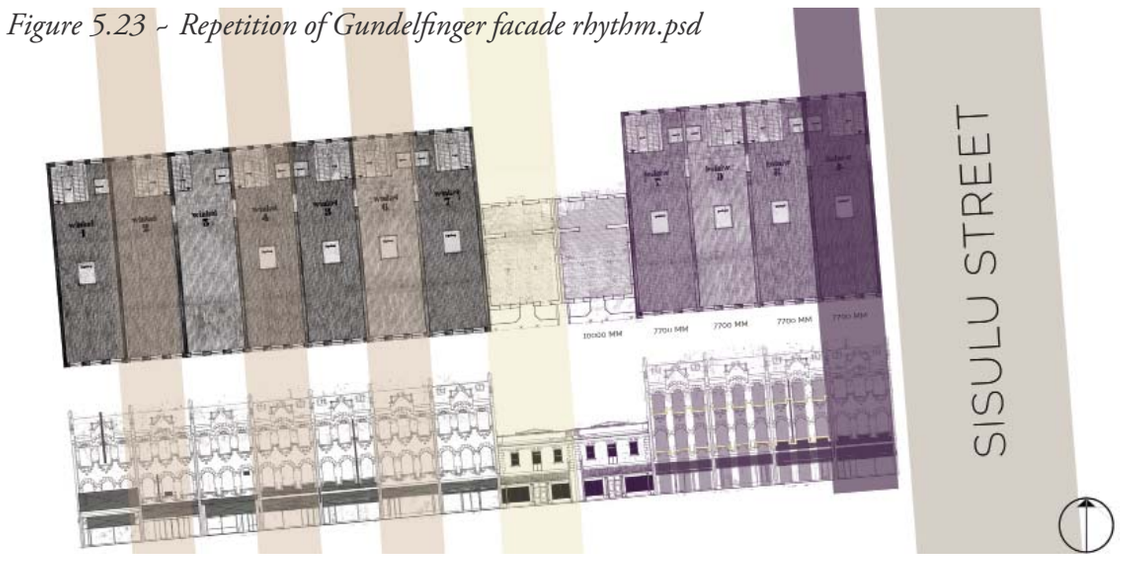


Figure 5.23 ~ Repetition of Gundelfinger facade rhythm.psd

The State Theatre building is an object in the city without any relation to its context.

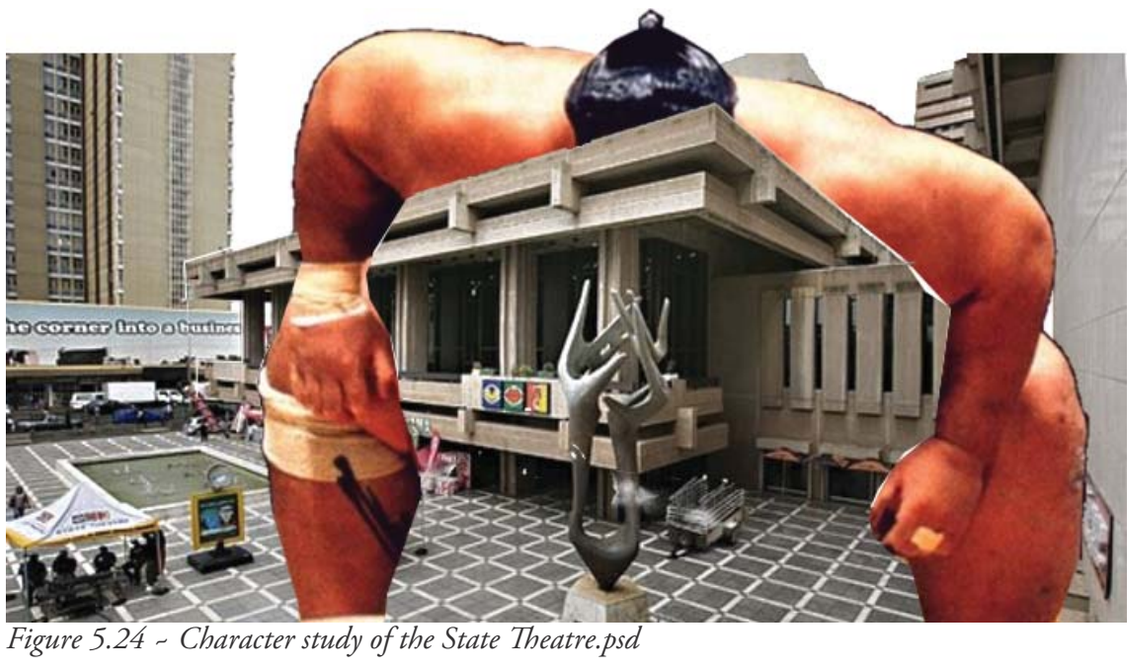


Figure 5.24 ~ Character study of the State Theatre.psd

State Theatre

The national State Theatre was built during the 1970s when the Department of Public Works launched many similar nationalistic projects to usher in a new modern Pretoria. These included the Volkskas (ABSA) building, Strijdom Square and the Munitoria. The aim was to monumentalise the progress South Africa made as an independent Republic since 1961. In 1962 - due to the segregation laws - discussions around international disinvestment started. The large scale building project was therefore also used to boost the morale.

The State Theatre is an example of the Japanese brutalist metabolism of the 1960s. (Metabolism architecture 2015). The Tokyo Olympics in 1964 helped spread the Metabolist ideals to the west. (Henning, Cronje & Adam 2012) The State Theatre's design strongly followed those of the Metabolists.

The State Theatre building is an object in the city without any relation to its context. It is a statement of power and international prominence. Its scale is unhuman, its edges uninviting and its mass on the site is intimidating. None of the intimacy of the former Market Square survived.

Professor Dieter Holm, from the Architecture Department of the University of Pretoria said,

> *"too many of the modern buildings are built on the false assumption that only the inside of the building is important. Only a few hundred people have to work inside, but hundreds of thousands are confronted with its ugliness" (Saunderson Meyer 1979).*

The aim for the site is therefore to counter the insulated character of the State Theatre through a public space that is accessible, visible, human-scaled and inviting. Where the State Theatre dominates and overpowers as an object in space, the new intervention aims to counter that by becoming intimate and haptic – more an experience than a building.

Figure 5.25 ~ Character study of the Sammy Marks Centre.psd

Sammy Marks Centre

The Sammy Marks Square and shopping mall built in 1993 was designed by Stauch Vorster. It accommodates retailers, offices, a library and colleges (Henning, de Villiers & Cronje 2010).

Built in red brick, it tries to pay tribute to the Sammy Marks building. Its post-modern, new-classical style contrast the modern architecture of the State Theatre, the ABSA building and the, now demolished, Munitoria. It sides more with the Sammy Marks building in trying to be more accessible and to a human scale.

Unfortunately the square turns inward. The northern façade is inaccessible and consists of a very long blind wall, with no indication of the programmes inside. The eastern façade is also impenetrable except for the arcade entrance. The fact that the building forms a square does not make it an active public space, it just pushes the formal shop fronts further back from the street. This however benefited the informal vendors who claimed the street edges.

As a response to this condition the design proposes to create a new library entrance to the north and to open up the eastern façade to the new proposed public square to the east.

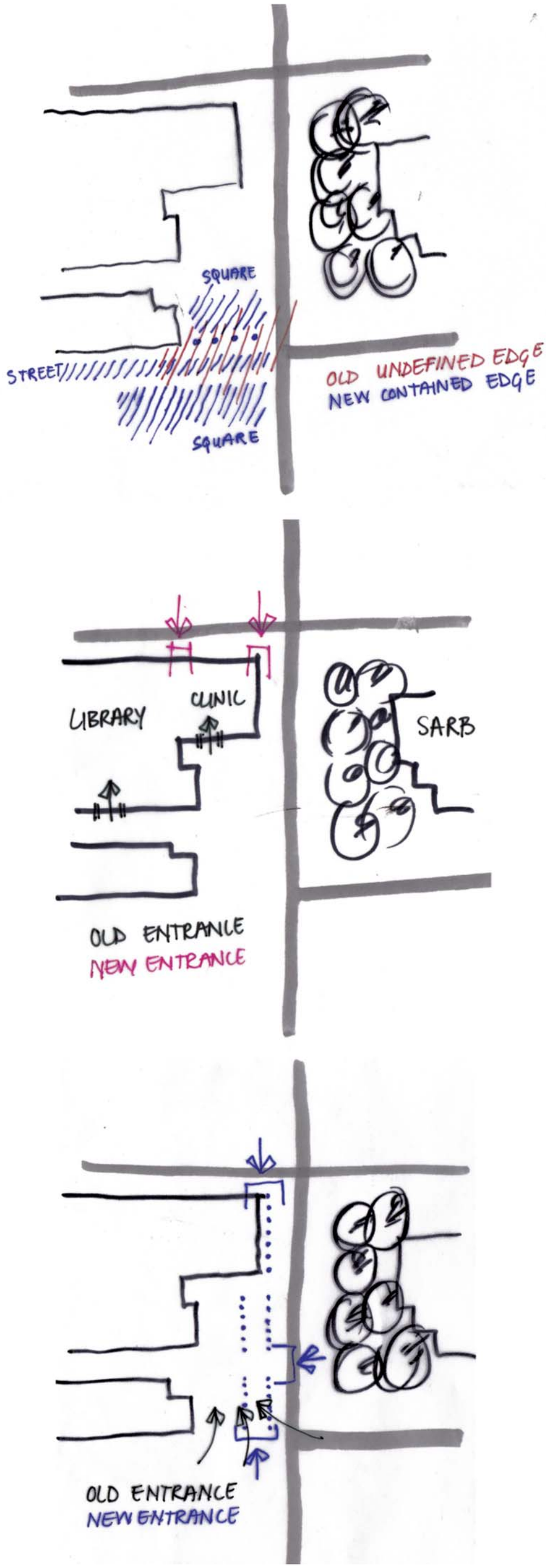


Figure 5.26 ~ Proposed new entrances and openings.psd

Figure 5.27 ~ Character study of the South African Reserve Bank.psd

Reserve Bank

The Reserve Bank building was designed by Anthony Doherty and built around 1988 (Reserve Bank Head Office, Pretoria n.d.). Clad in black glass it completely overpowers all the buildings in the vicinity. It towers to an unprecedented height of 150m into the Pretoria skyline. (List of tallest buildings in South Africa 2015) It has an intimidating presence and its beautifully terraced public gardens with fountains are inaccessible behind palisade fencing.

Pretoria's inner city is characterised by historic buildings of the late 1800s and early 1900s with heights no more than eight storeys. With legislation that protects all structures older than 60 years the chances of Pretoria becoming a high density, high rise, skyscraper skyline city is highly improbable ["National Heritage Resources Act, 1999 (Act No. 25 of 1999)" 1999]. The Reserve Bank and the ABSA tower will therefore most likely always be the exception to the rule. For that reason a new intervention should rather strive to strengthen the existing historic scale of 15-25m heights instead of trying to bridge the 150m height of the Reserve Bank.

A more appropriate way to address the Reserve Bank will be to find a dialogue between the Reserve Bank and the ABSA Tower by way of materiality.

Figure 5.28 ~ Dissolve edge between urban built and urban forest.psd

Urban Forest

The terraced garden of the Reserve Bank is currently behind palisade fencing. The urban vision proposes to re-establish the terraced gardens as a public space. It also suggests enhancing it by adding more trees, creating a dense urban forest. In this way the trees become a link between the historic city scale and the out of scale Reserve Bank.

The proposed design intervention furthermore aims to blur the boundary between the urban forest and the city by allowing the urban forest to spill into the rest of the city.

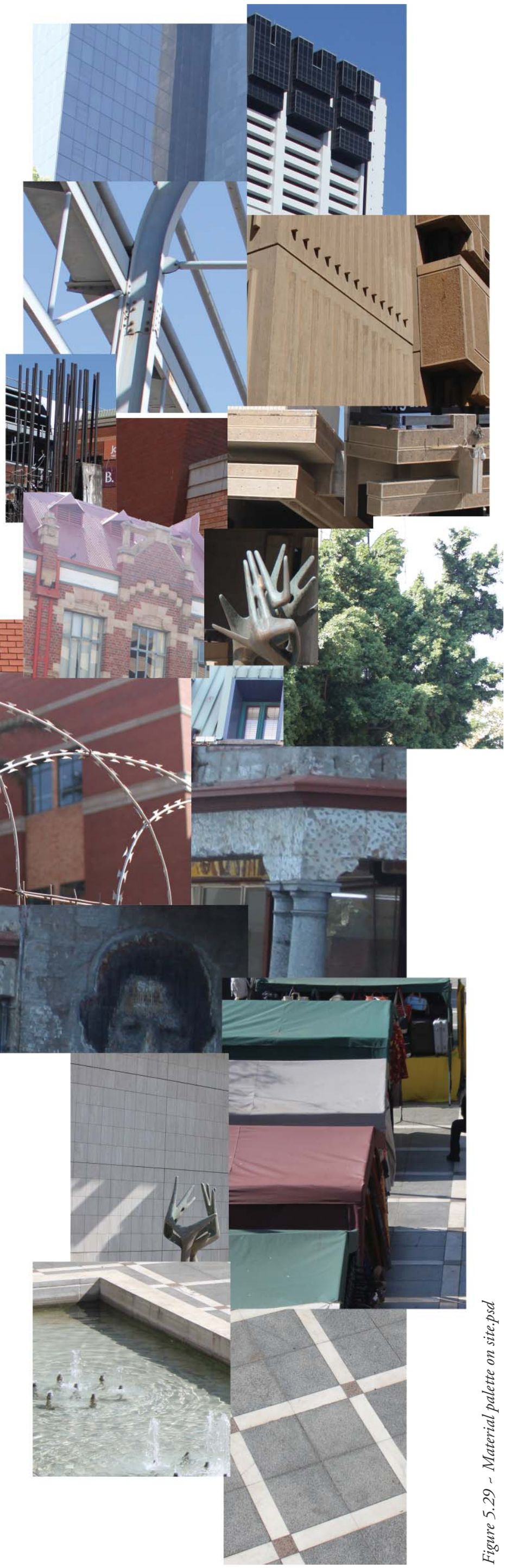


Figure 5.29 ~ Material palette on site.psd

MATERIAL CONDITIONS

The intention of the design is to augment the existing programmes and to create a device that would connect the otherwise unconnected buildings and programmes. The existing buildings and programmes are therefore a major driver in the design and this will also be evident in the attitude towards existing materiality.

Gundelfinger

The red brick façade, distinctive of old Pretoria buildings of the 1900s, were the work of John Johnston Kirkness. He started a brick kiln in Muckleneuk, Pretoria, from where bricks, tiles and other ceramics were used in construction from Cape Town to Harare. J.J. Kirkness, a friend of Sammy Marks, built the Sammy Marks building (Coetzee 1985). Its aesthetic proportions and excellent workmanship is a monument to brick, sandstone and cast iron.

In order to ground the new design onto this site, the idea of brick as the historic backbone of the built environment of Pretoria must be communicated.

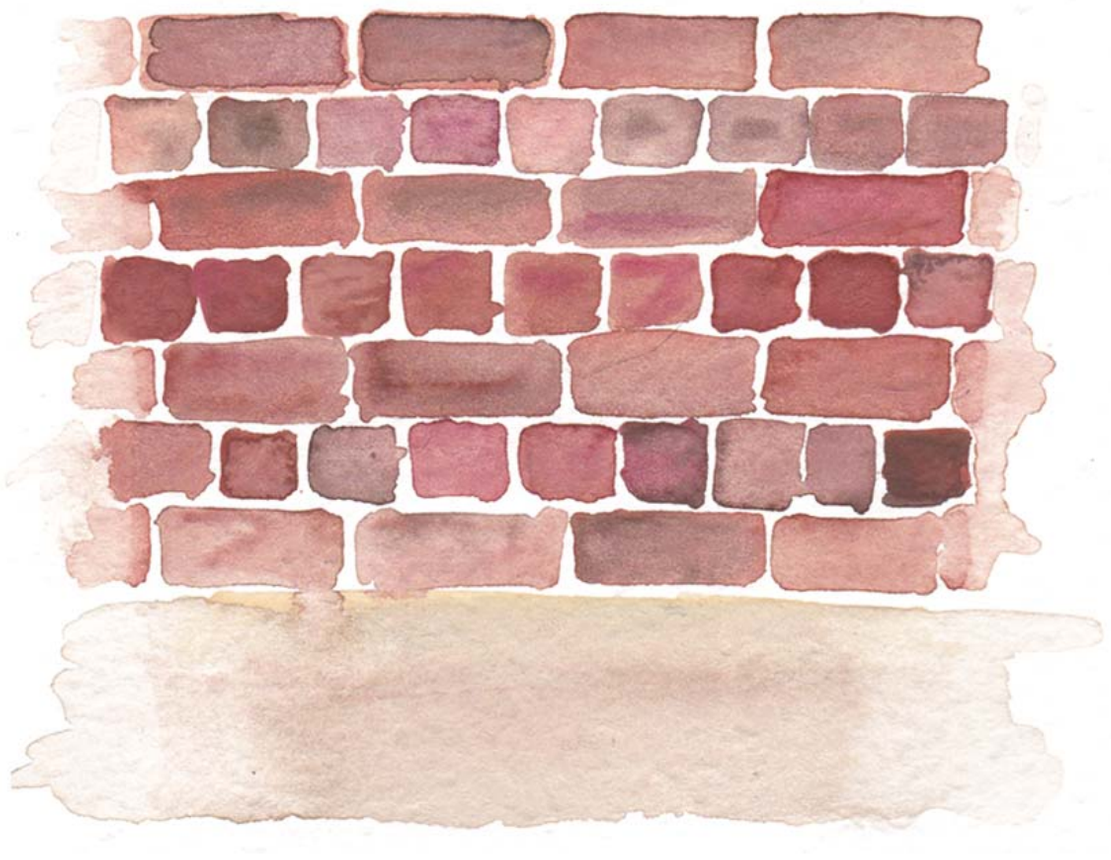


Figure 5.30 ~ Gundelfinger Kirkness red clay brick facade.psd

Sammy Marks Centre

The Sammy Marks Centre, including the buildings that house the library and the clinic, acknowledges the masonry in the Gundelfinger building. Its response is however out of proportion and too heavy for the site. The new design response will be to consider the brick and its inherent properties and historical applications and to draw from both the Sammy Marks Centre buildings and the Gundelfinger buildings of Kirkness brick, to find an appropriate response.

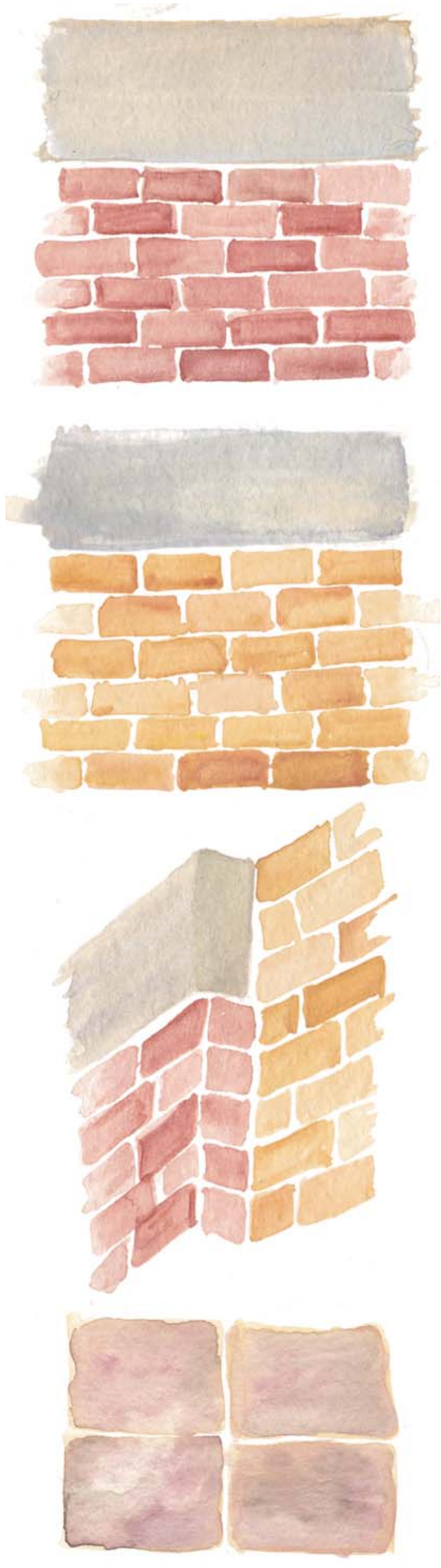


Figure 5.31 ~ Sammy Marks Centre brick facade with pink granite finishes.psd

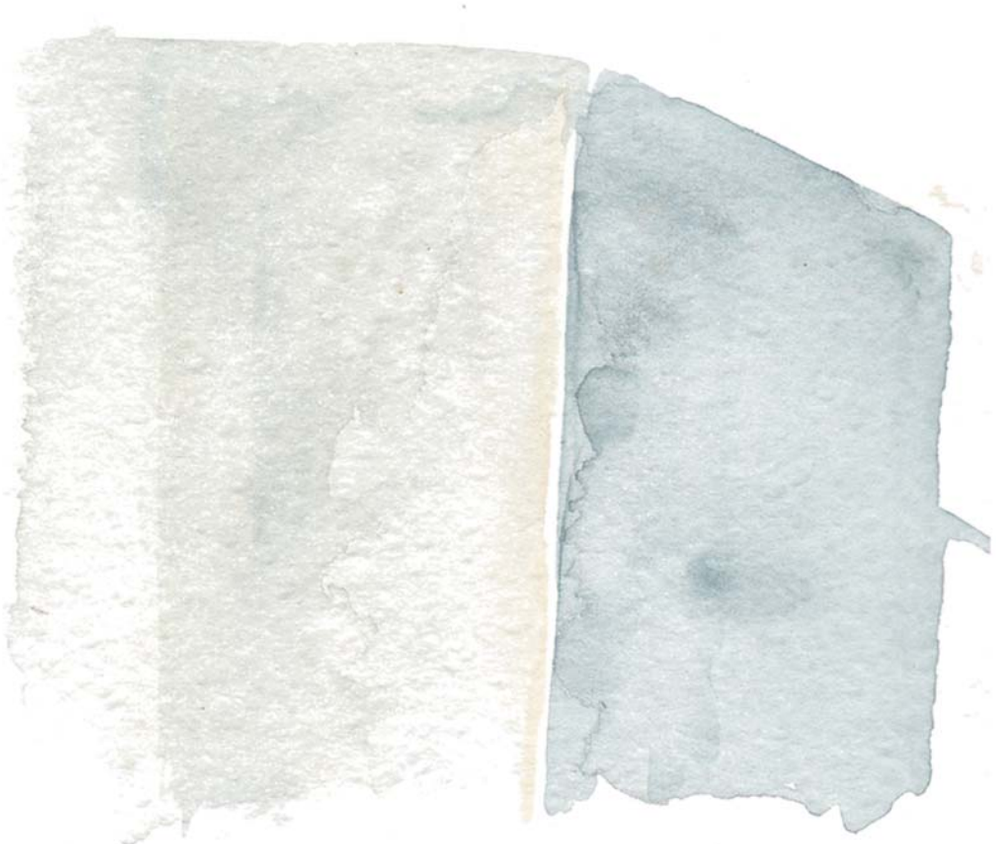


Figure 5.32 ~ South African Reserve Bank glass and pink granite.psd

South African Reserve Bank

The Reserve Bank's black glass facade is not an appropriate material for the climate. The only sensible material used is the pink Rustenburg granite for the plinth. The appropriate response to this condition is to reference the black glass in the new design, but in a climatic responsible way.

Figure 5.33 ~ Sidewalk paving bricks.psd

Paving stones

The existing paving stones are appropriate for the context, but it is however laid haphazardly due to the lack of a unifying project on the site. Addressing the surface of the city can enhance the legibility; and the haptic experience the surface contributes to the creation of a human scale.

Figure 5.34 ~ Water furrow shale.psd

Water furrows

The water furrows were skilfully constructed with shale. It is reminiscent of ancient Roman waterways. Water flowing over hard cold stone delivers a refreshing emotive quality. A possible response will be to reference this quality in the design of some of the cleansing spaces.

Figure 5.35 ~ State Theatre béton brut with granite finishes.psd

State Theatre

What makes the State Theatre materiality so severe is not the mere fact of it being concrete, but actually the way in which the concrete was used. It mimics the form of the traditional timber jointed wood structures of Japan: a traditionally delicate and perfectly appropriate architecture for timber. Concrete however is a material for sculpting and moulding, not for assembling and connecting. Concrete is poured into columns and beams. Therefore, making concrete look like it was assembled and connected counters the integrity of the material. The most appropriate response to this condition will be to work with integrity with whatever materials are used in the new design. As Louis Kahn says,

> *"If you think of Brick, you say to Brick, 'What do you want, Brick?' And Brick says to you, 'I like an Arch.' And if you say to Brick, 'Look, arches are expensive, and I can use a concrete lintel over you. What do you think of that, Brick?' Brick says, 'I like an Arch.' And it's important, you see, that you honour the material that you use. [..] You can only do it if you honour the brick and glorify the brick instead of short changing it."(Voyatzis 2013)*

CIRCULATION CONDITIONS

Circulation on site happens via arcades, streets and basement parking. These three existing conditions will be discussed and responses suggested.

Compared to the impersonal wide streets and tall modern buildings, the arcades bring you into the intimate heart of the city.

Arcades

The arcades of Pretoria form an unbroken north-south connection of pedestrian walkways. Clavier attributes this to the fact that Pretoria city blocks have such long east-west dimensions (Clavier 1994:21). The arcades therefore become a network of shortcuts, creating opportunities for more secluded spaces that are scaled more intimately.

This unique phenomenon introduces the dweller to a completely different side of the city. Compared to the impersonal wide streets and tall modern buildings, this brings you into the intimate heart of the city. It is human scaled and makes the city more accessible.

The Arcade is therefore a strong driver for design both in its programmatic unction and its architectural implications.

Figure 5.36 ~ Burlington Arcade.psd

Streets

The streets of Pretoria, like most modern cities, gave priority to the motor vehicle. Pedestrians were pushed to the sides, having to constantly yield to the traffic.

In the urban vision for the city specifically designed pedestrian crossings are suggested. It endeavours to give priority to the pedestrian.

The design should respond by claiming more of the street. As Jan Gehl so clearly illustrated, more roads create more traffic, less road creates less traffic, "the volume of car traffic almost everywhere is more or less arbitrary, depending on the available transportation infrastructure" (Gehl 2013). People will find alternatives.

Figure 5.37 ~ Lilian Ngoyi (Van der Walt) Street.psd

Basements

The State Theatre and the Sammy Marks Centre both have basement parking. It is however not connected to each other. Access to and from the basements, visibility of entrances and lighting in the basements are lacking. These are all conditions that can partly be addressed with the design.

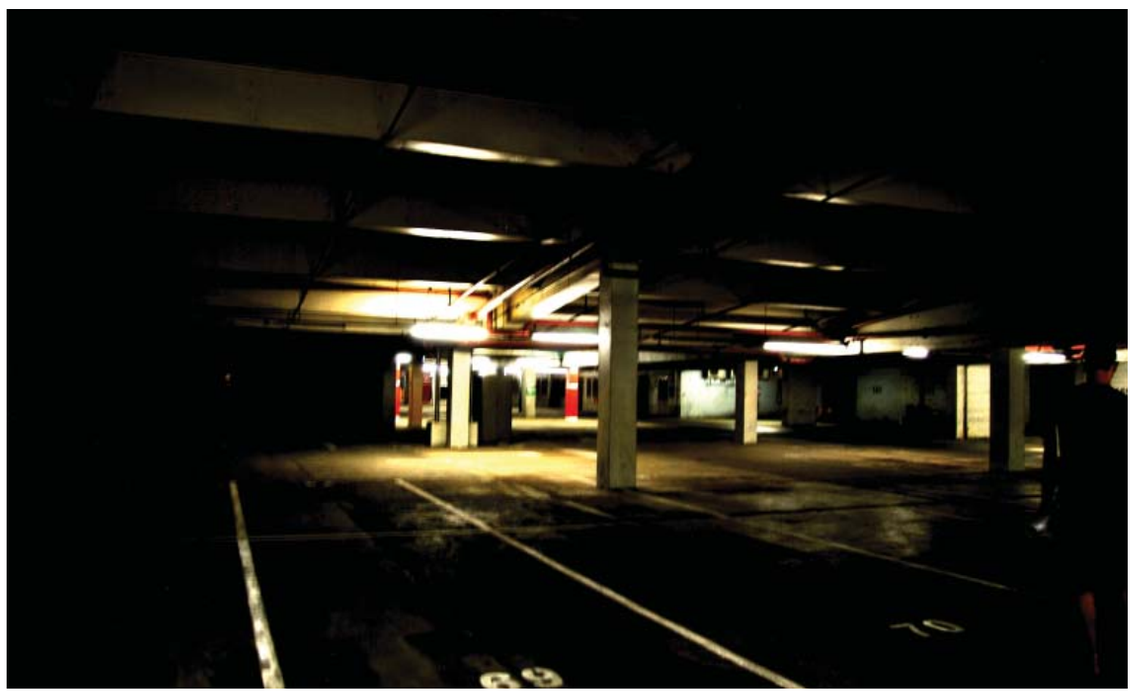


Figure 5.38 ~ Basement parking.psd

ENVIRONMENTAL CONDITIONS

The three major drivers in the climate of the site are solar exposure, rain and wind. Pretoria does not get a lot of wind; therefore designing for wind is not feasible. Pretoria does get a lot of sunshine and rain, thus ways to respond to that will be discussed.

Sun

Temperature comfort and daylighting are the two systems that will be tested and communicated. Temperature comfort will be tested in the protruding steel boxes housing various programmes. Devices to achieve the comfort zone between 18˚C to 22˚C for 70% of the time will include solar shading, insulation material and methods to prevent thermal bridging. For the underground dance studio sufficient daylighting will be tested. Devices to achieve the desired 300lux will include light shafts, interior surface materials and colours, and additional artificial lighting.

The solar angles that should be designed for are Pretoria's solar altitude at different times of the year, as well as the solar azimuth on summer solstice. Pretoria's solar altitude at 12:00 on summer solstice is 88˚, at 12:00 on winter solstice is 44˚ and at 12:00 on equinoxes is 65˚. This will determine the overhang for the northern glazed façades. Pretoria's solar azimuth on summer solstice is 112˚ E to 112˚ W. The vertical solar louvres should therefore be at this angle.

Water

Due to the historic layer of the water furrows the harvesting and recycling of water will be an important driver in the design.

"The design process is based on a constant interplay of feeling and reason. The feelings, preferences, longings, and desires that emerge and demand to be given a form must be controlled by critical powers of reasoning, but it is our feelings that tell us whether abstract considerations really ring true. To a larger degree, designing is based on understanding and establishing systems of order. Yet I believe that the essential substance of the architecture we seek proceeds from feeling and insight." ~Peter Zumthor (Zumthor, 2010:21)

CHAPTER 6

DESIGN

TOWARDS ARCHITECTURE

Design process

The subjective intimate city meets the objective universal city

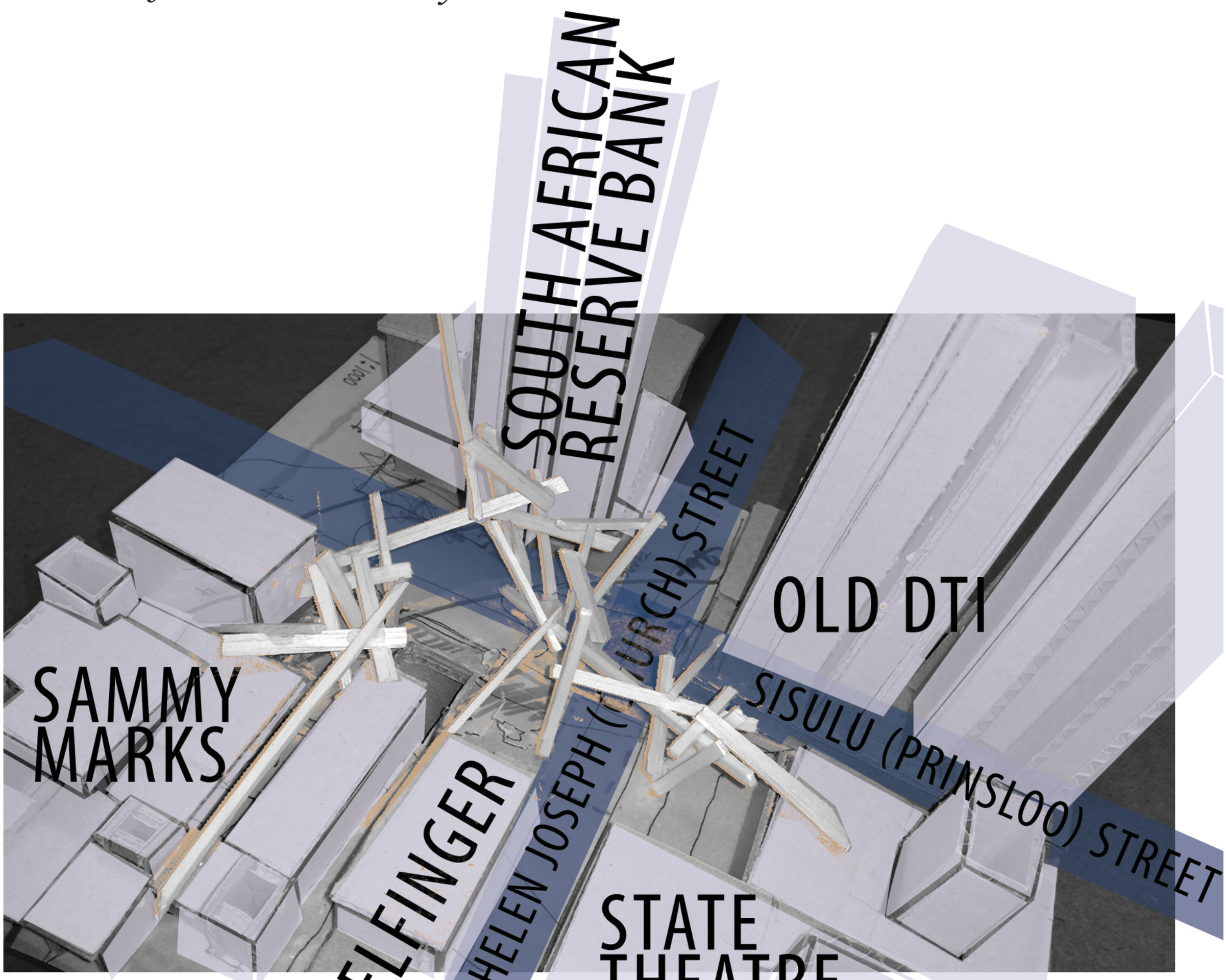


Figure 6.1 ~ First concept model.psd

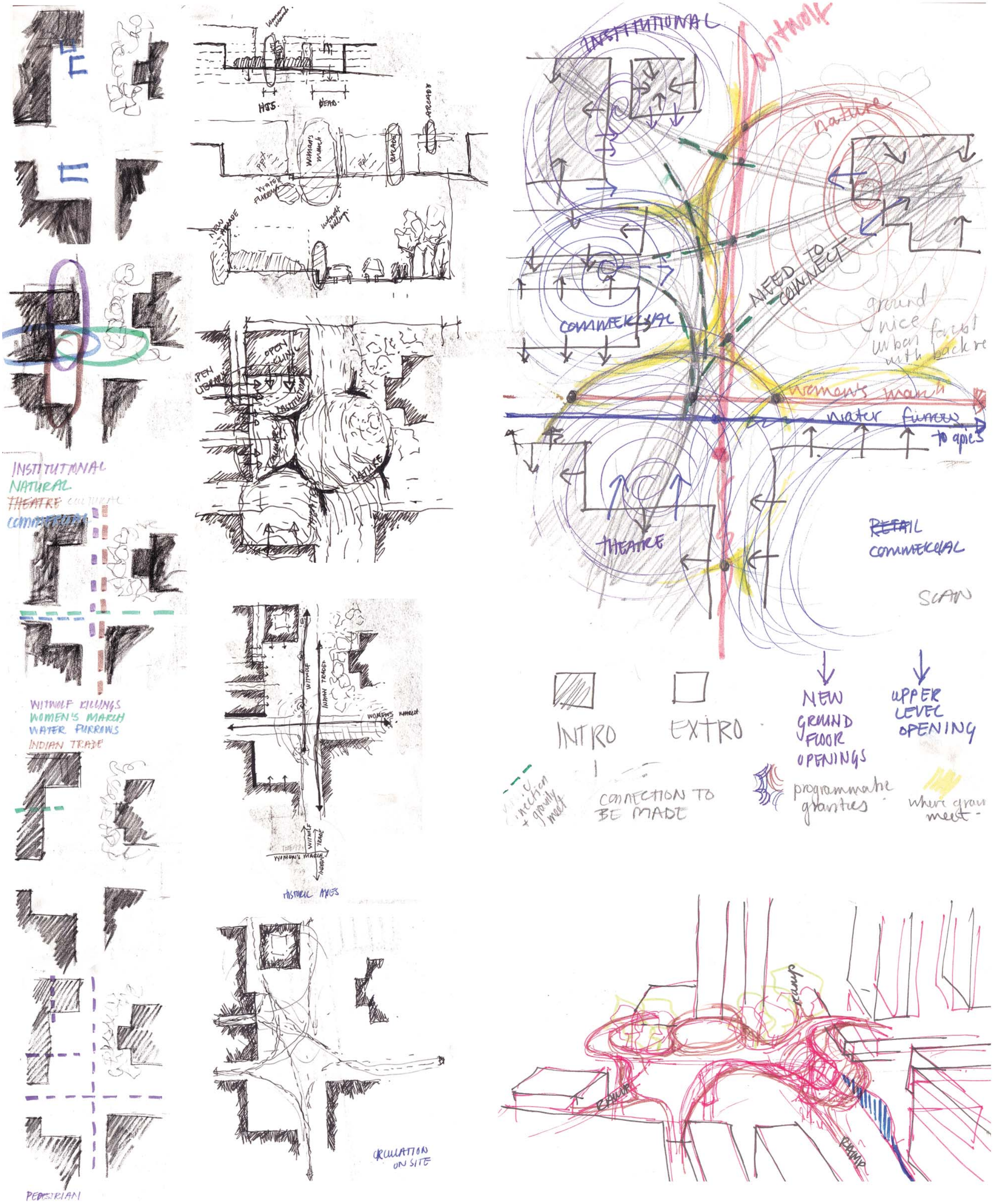


Figure 6.2 ~ Analysis and exploration on plan.psd

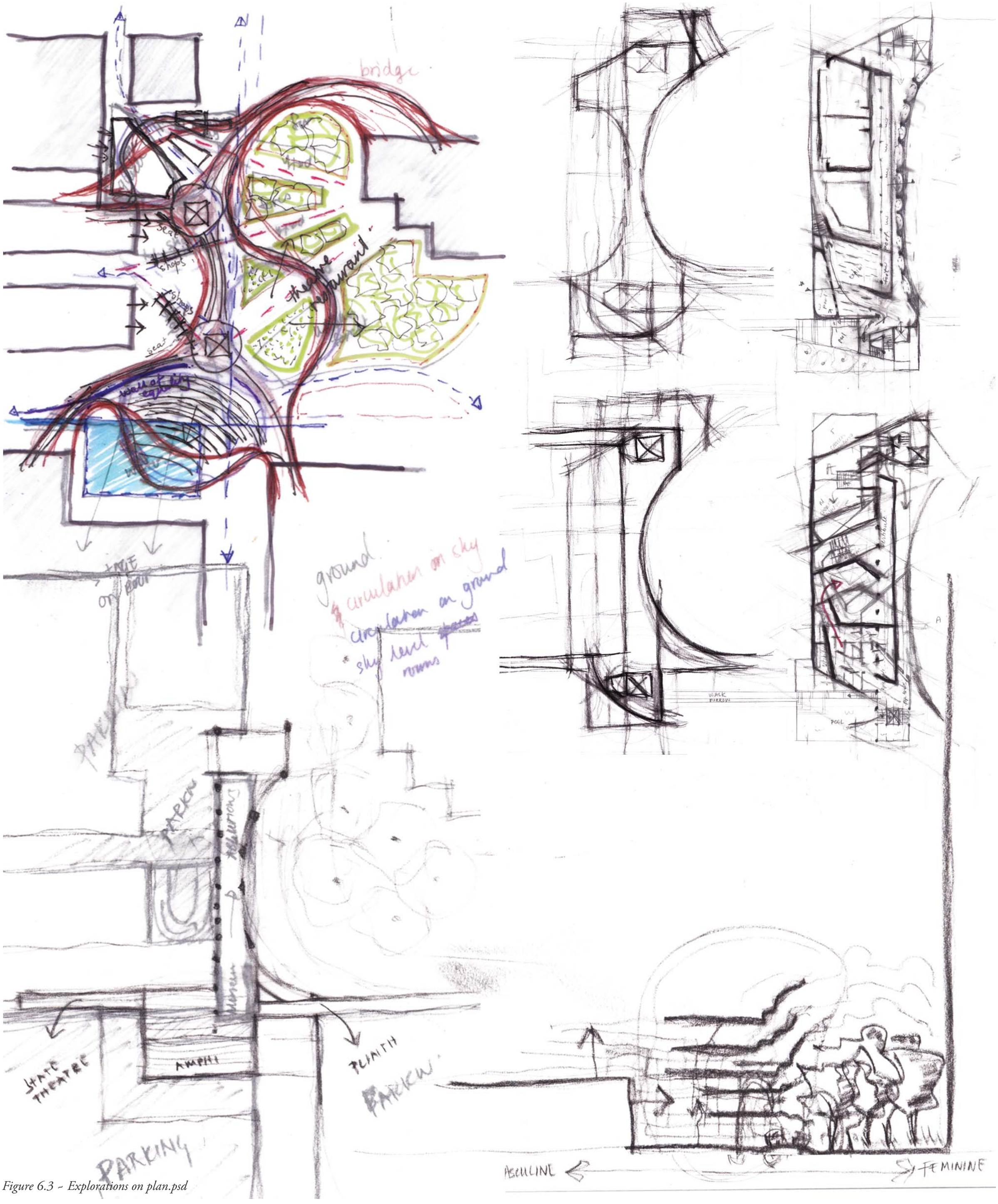


Figure 6.3 ~ Explorations on plan.psd

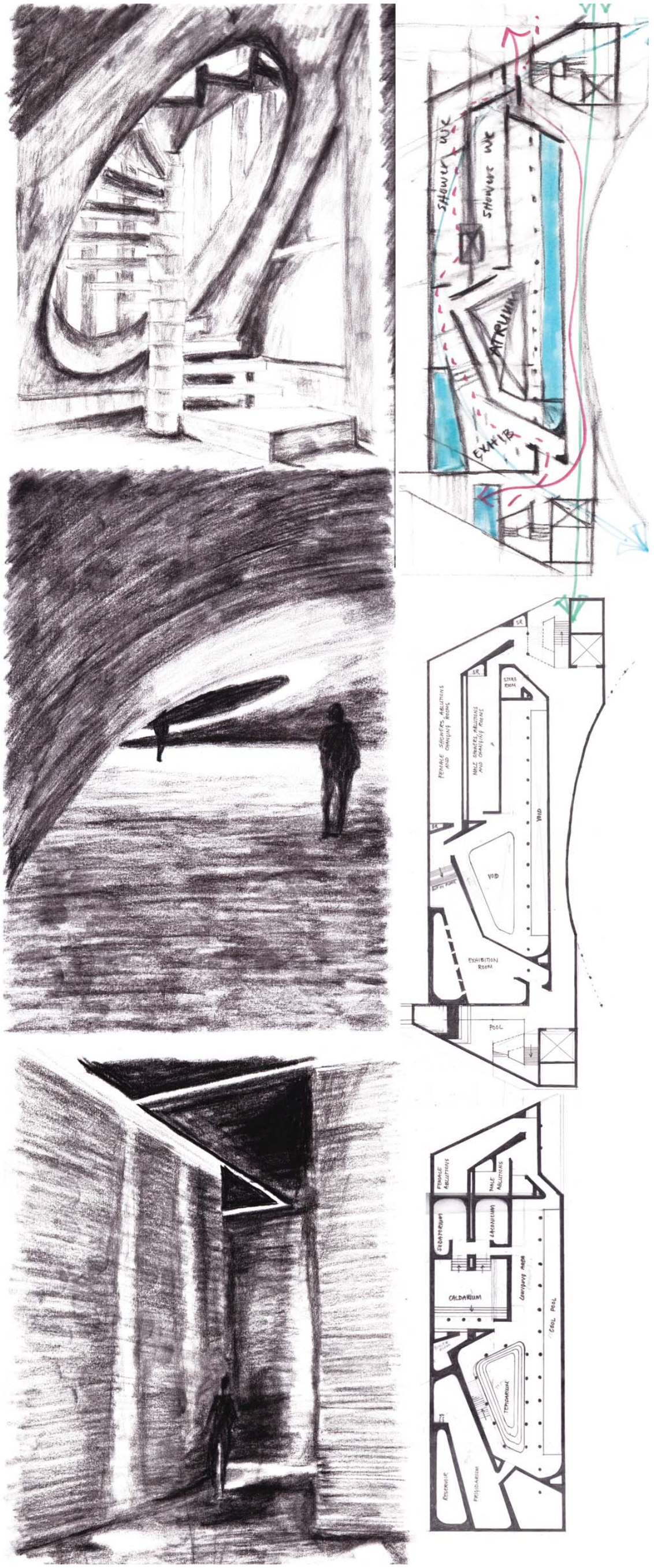


Figure 6.4 ~ Spatial inspiration drawing and concept underground bath house plans.psd

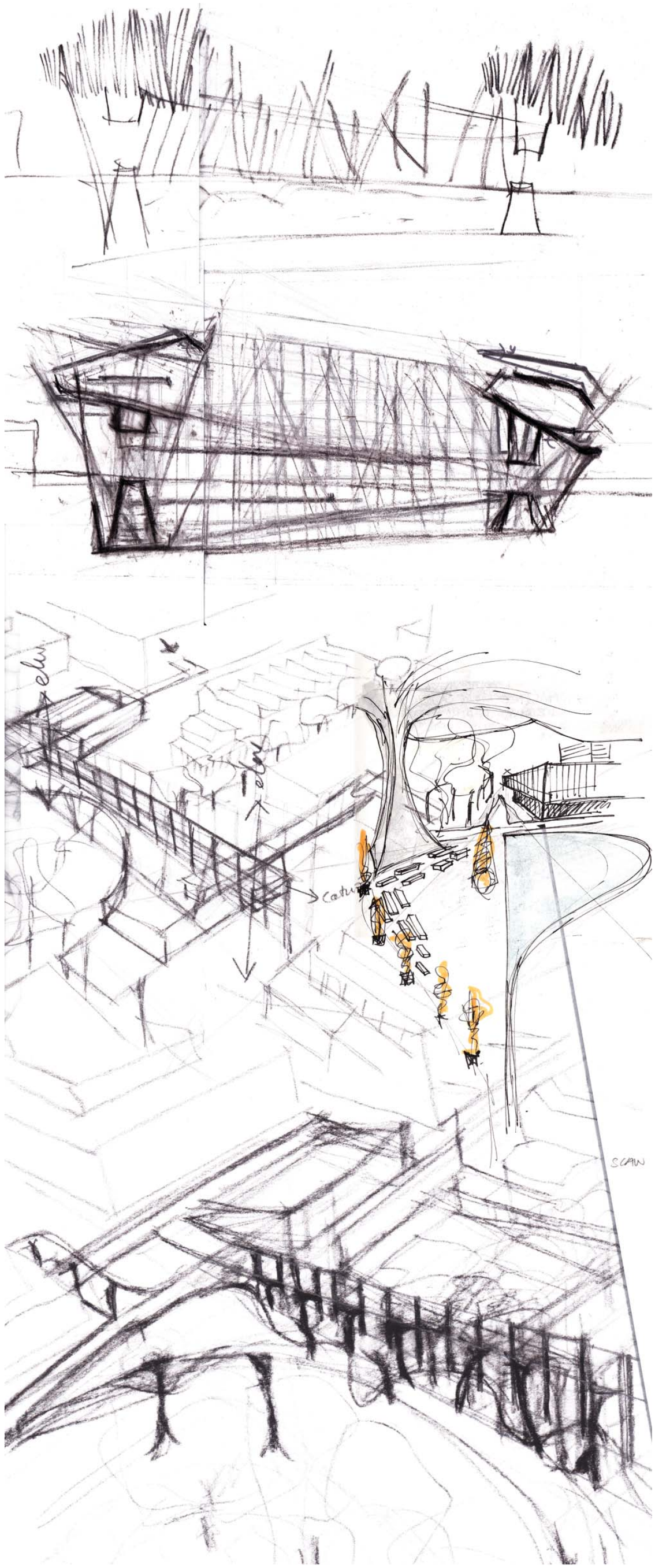


Figure 6.5 ~ Concept development of section on site.psd

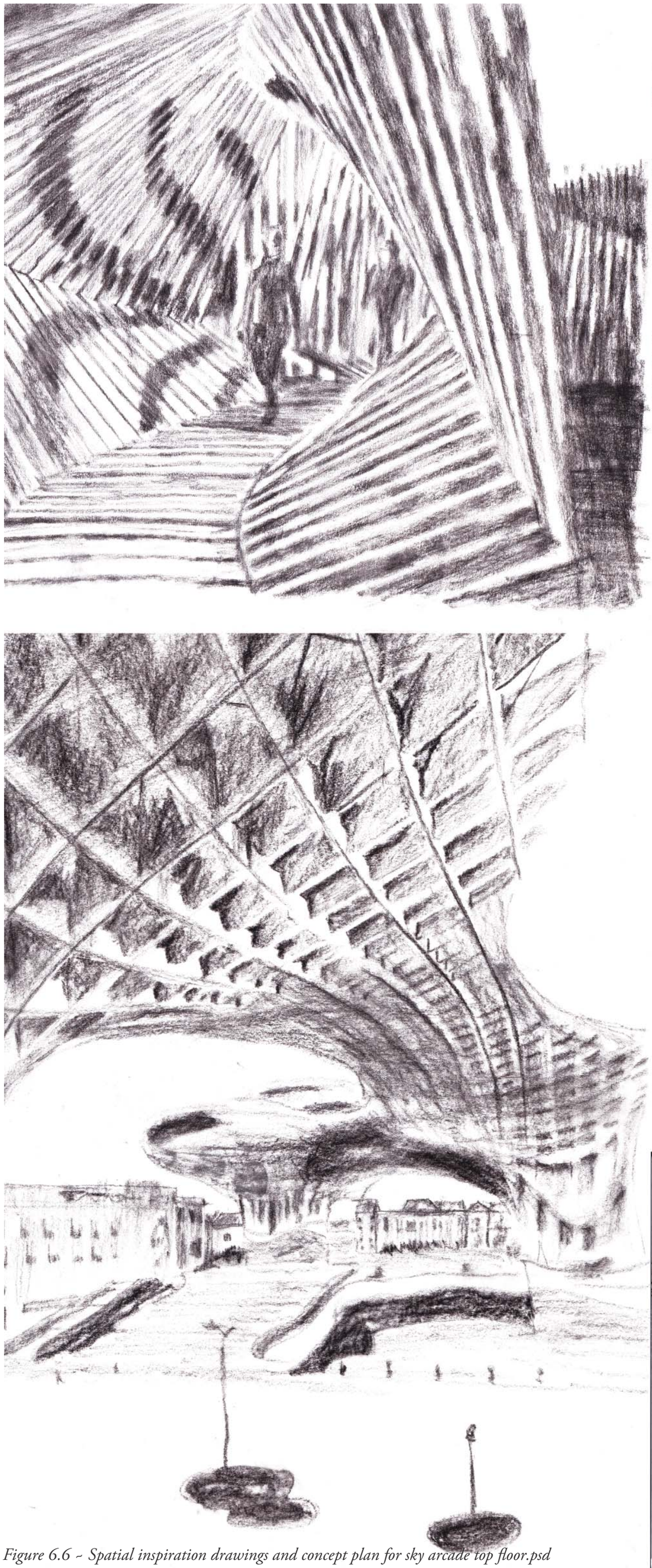


Figure 6.6 ~ Spatial inspiration drawings and concept plan for sky arcade top floor.psd

Figure 6.8 ~ Concept section diagram - Structure as mediator between the objective observation and subjective experience.psd

At this point water, the water furrows and programmes supported by water (a bath house) became the medium between the all the disconnected programmes and buildings. Water was the connector.

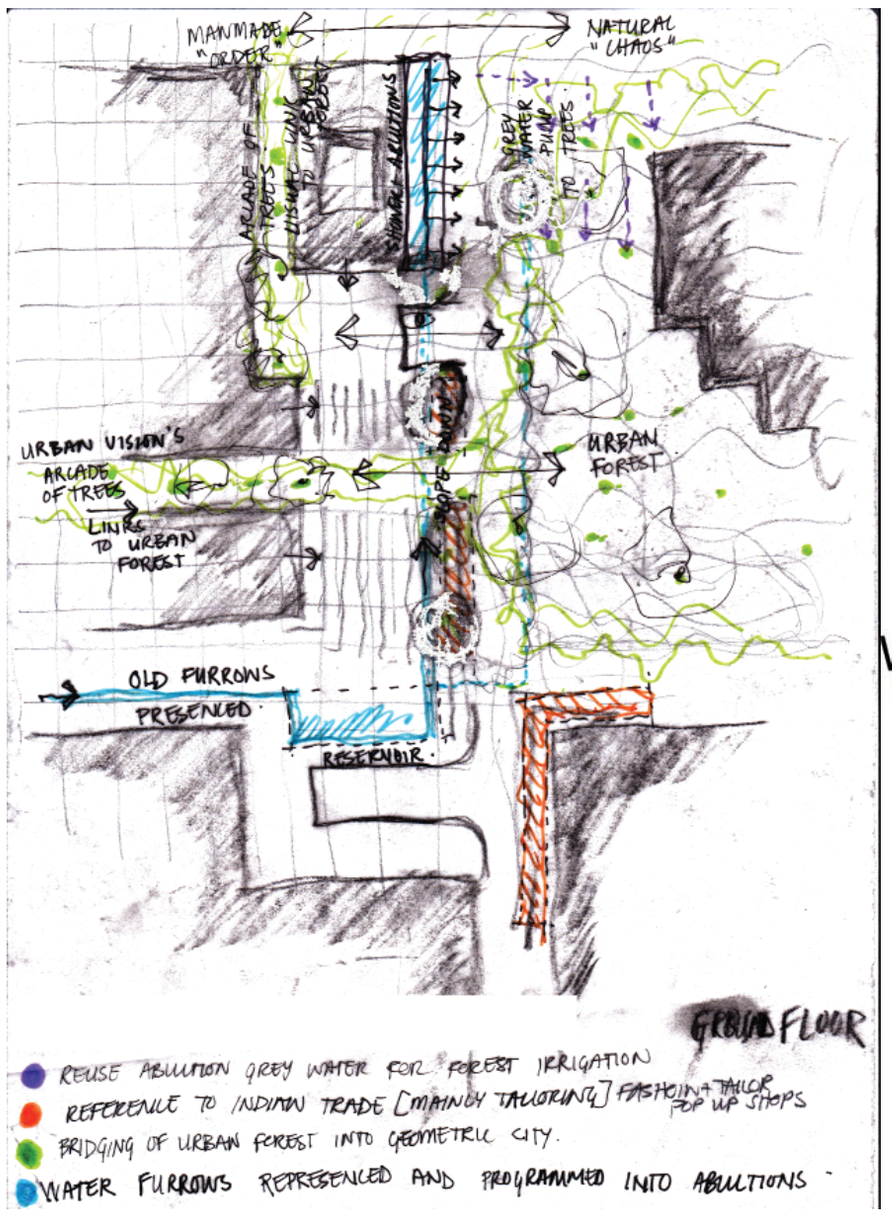


Figure 6.7 ~ Design intention on plan.psd

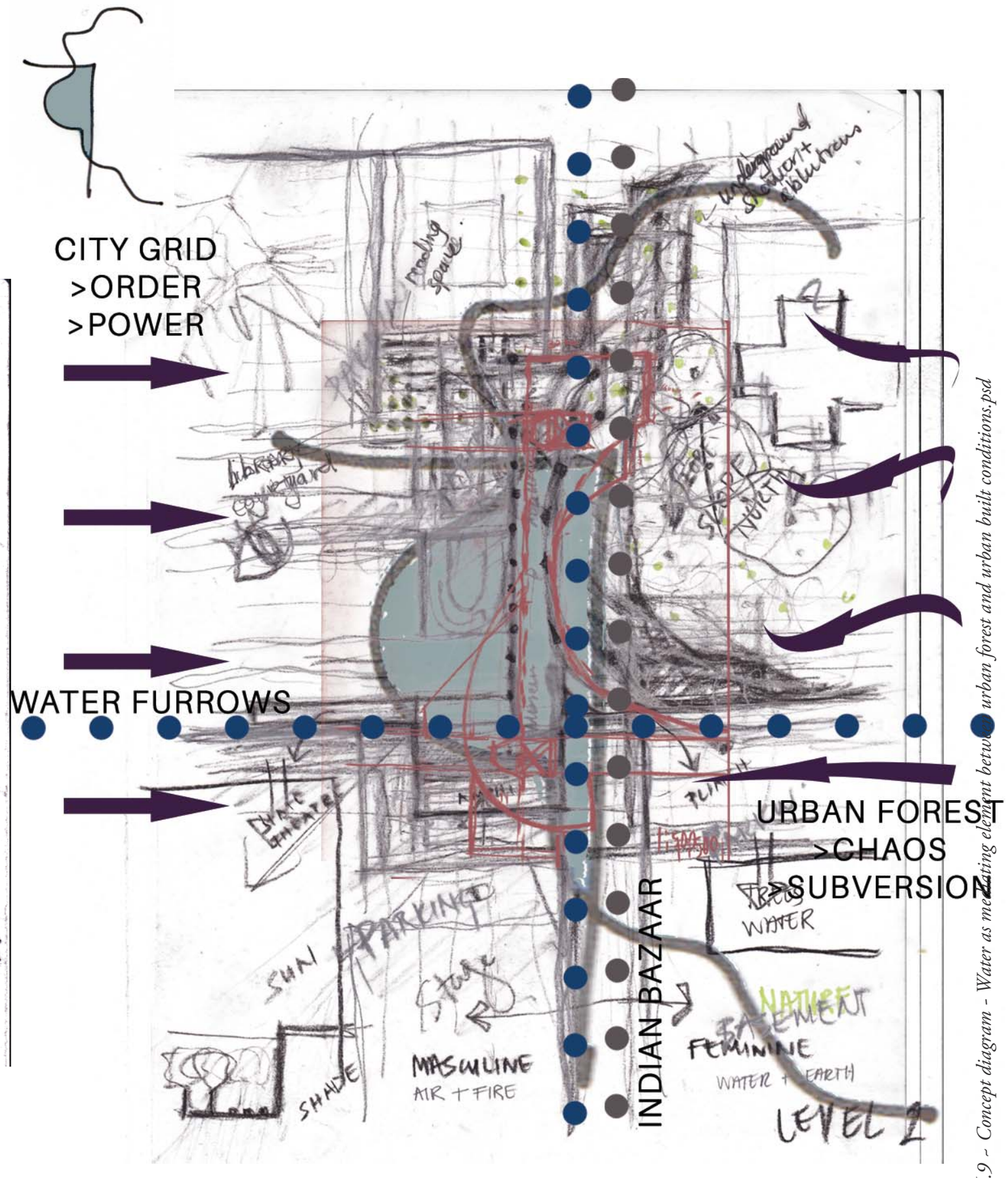


Figure 6.9 ~ Concept diagram - Water as mediating element between urban forest and urban built conditions.psd

New perceptions of the city are created through new architectural experiences

New architectural experiences:

>contest the existing biased representations of history
>merges existing programmes and buildings
>re-presence the historic narratives
>and accentuates the arcades systems

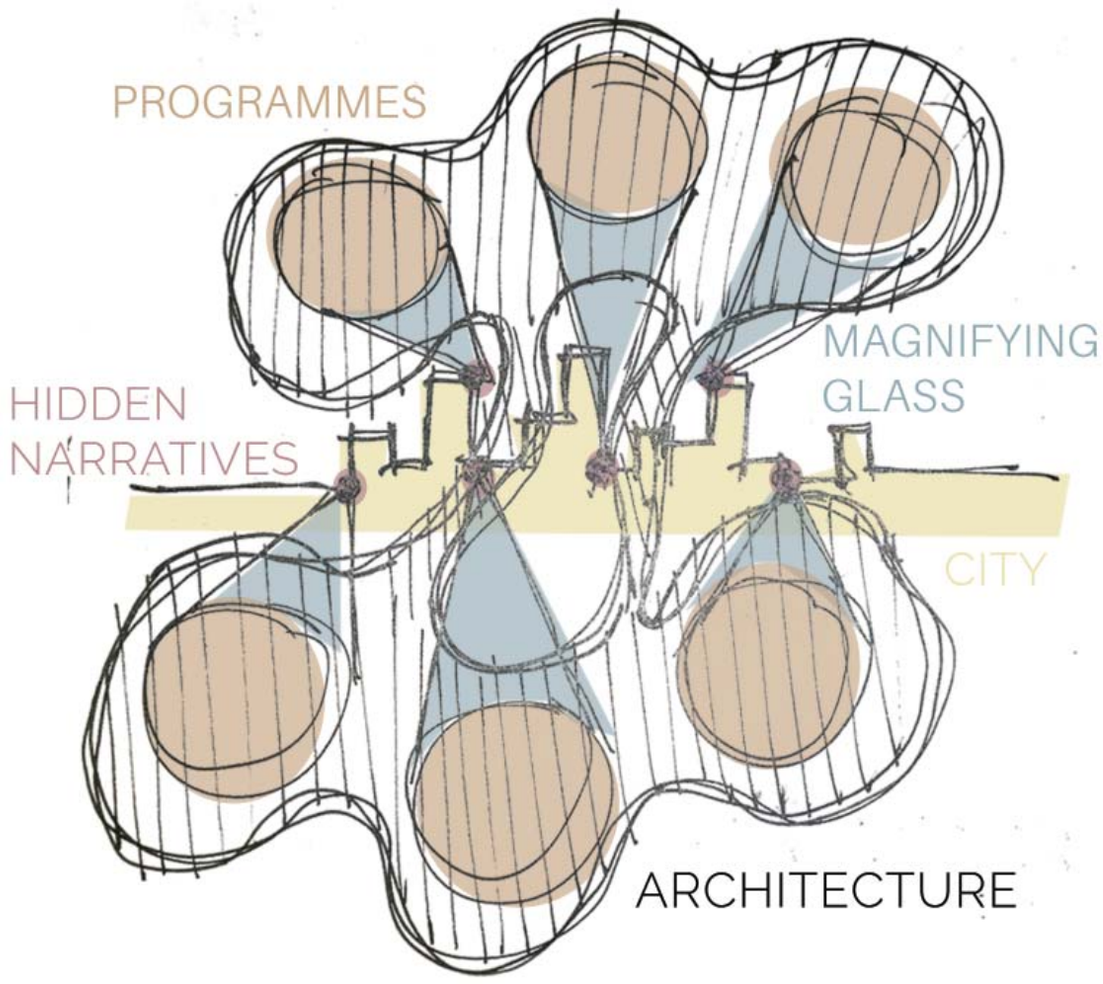


Figure 6.10 ~ Concept diagram - Represence the site's hidden narratives.psd

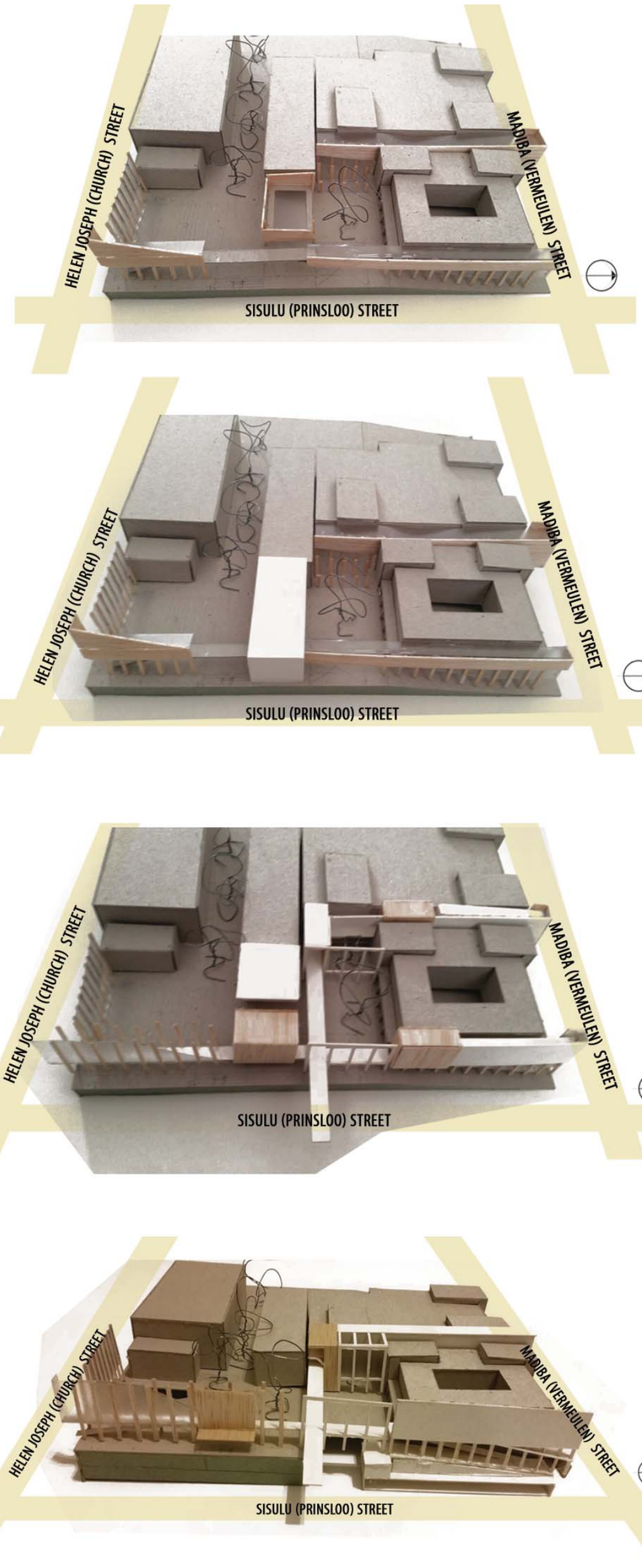
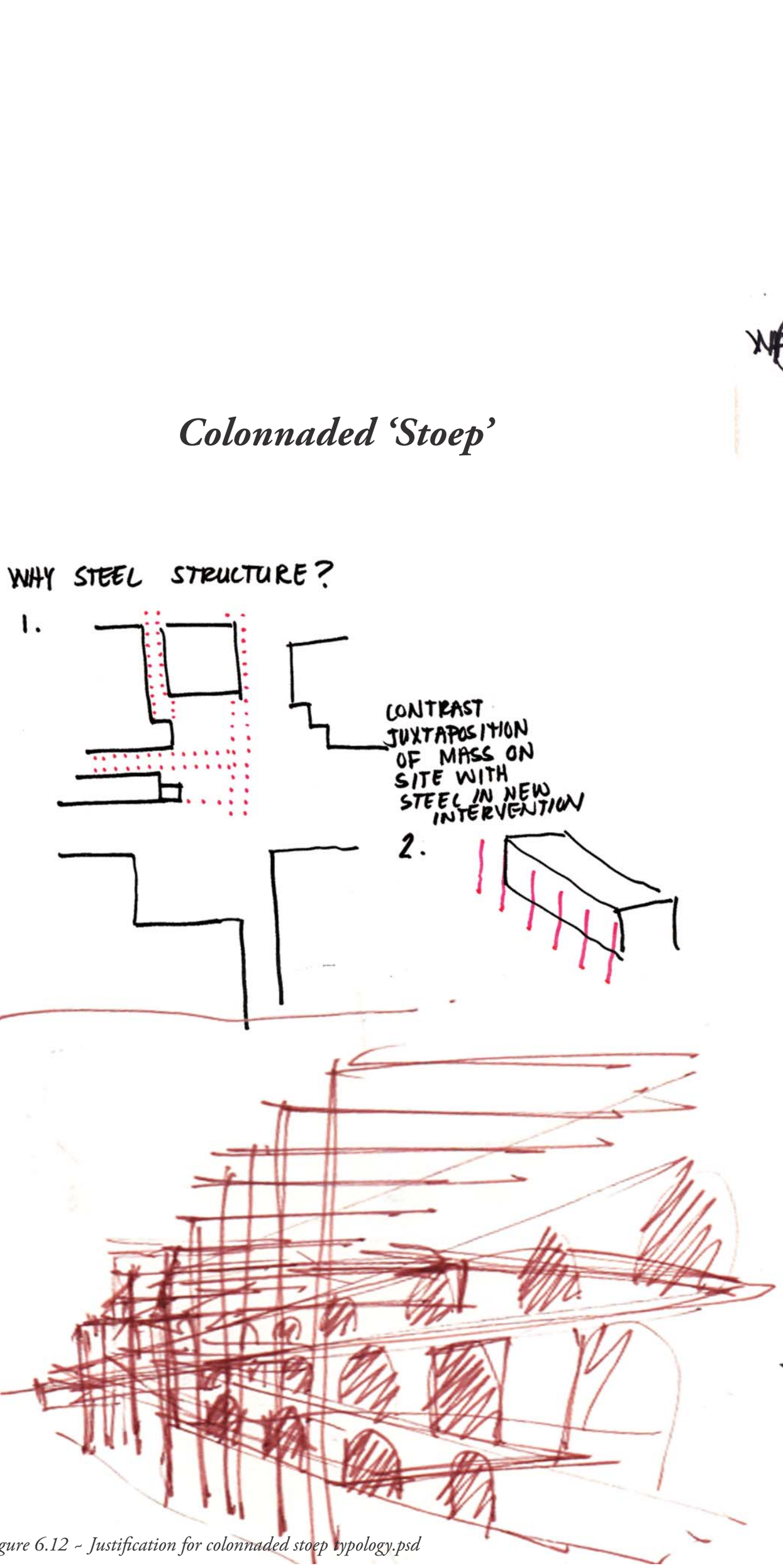


Figure 6.11 ~ Model explorations.psd

Colonnaded 'Stoep'



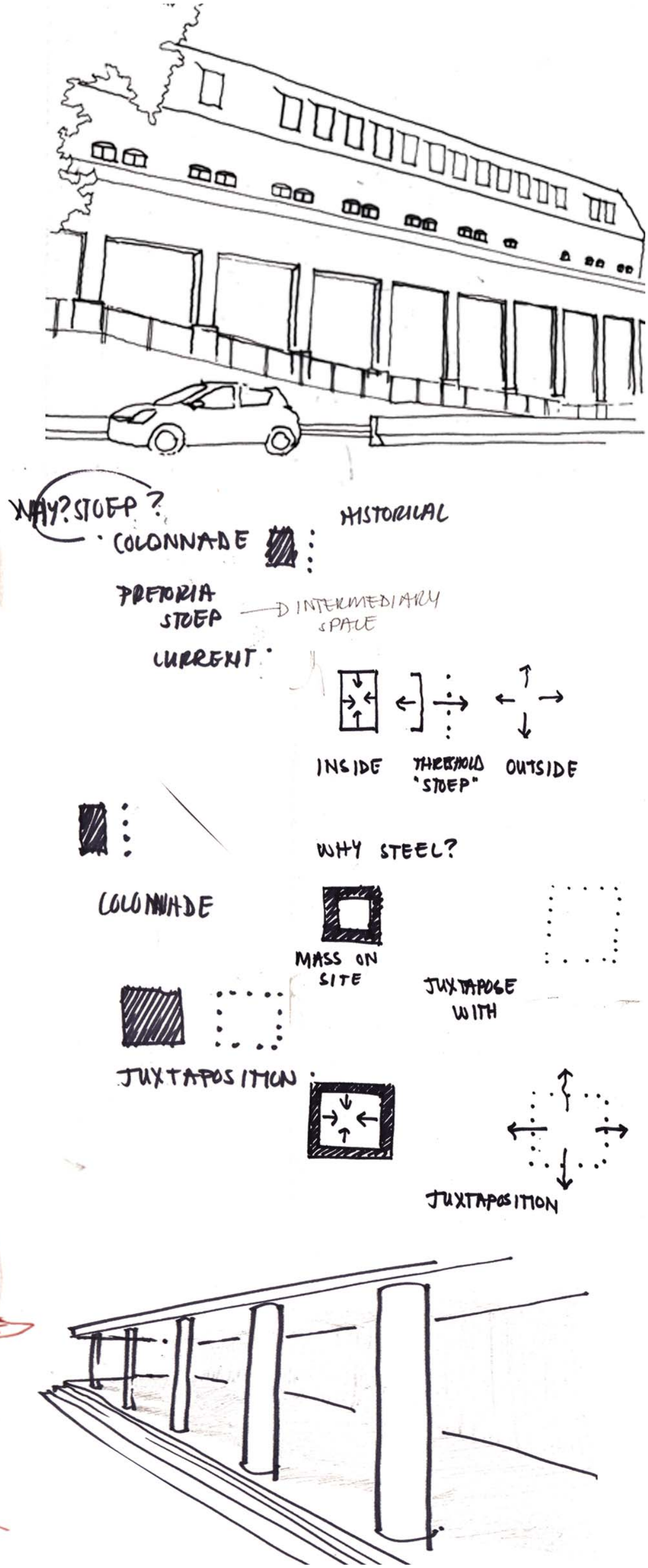
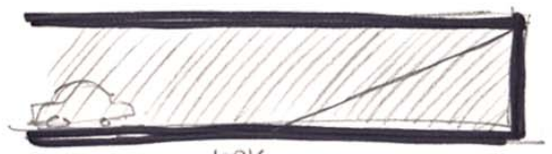
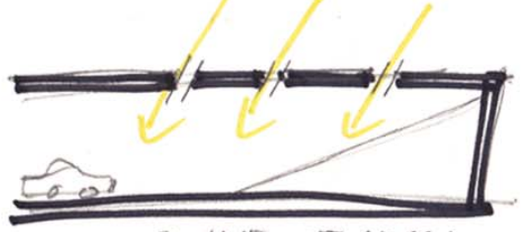
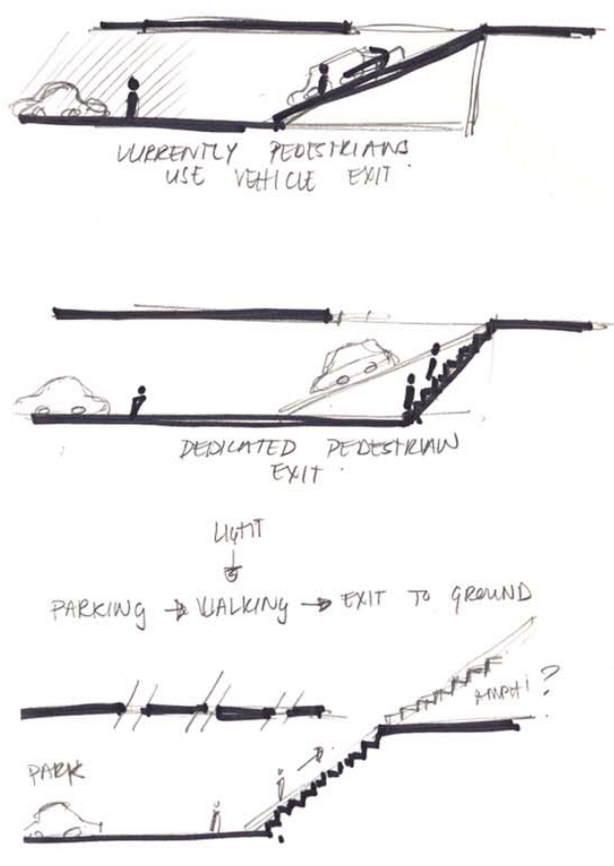


Figure 6.12 ~ Justification for colonnaded stoep typology.psd







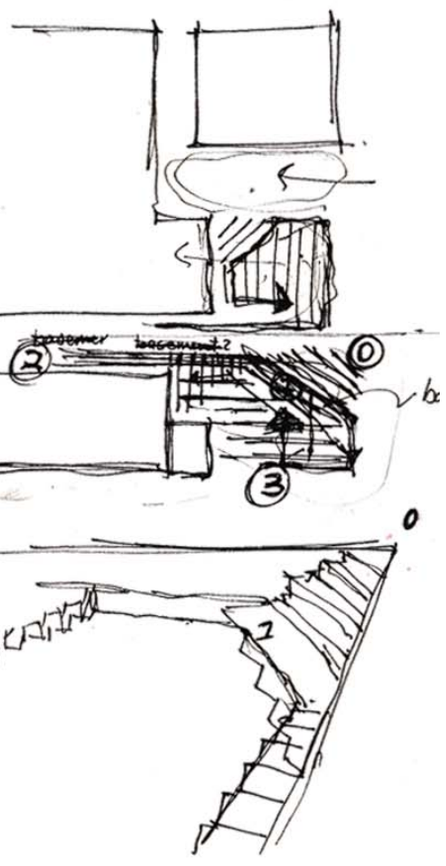
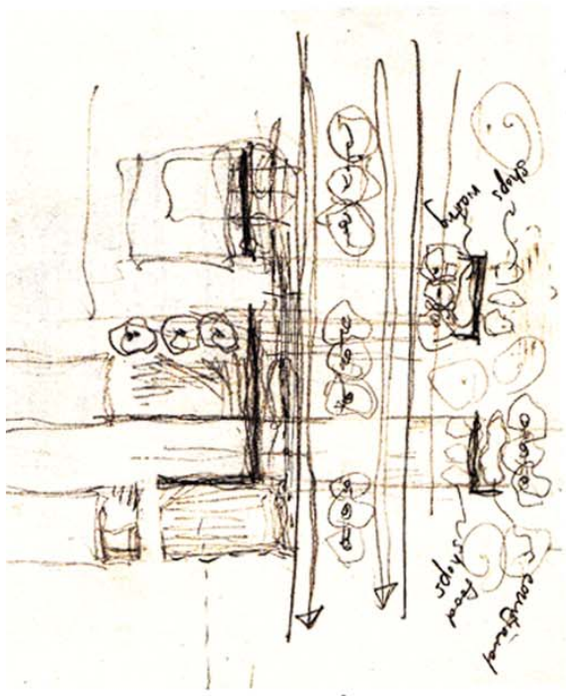
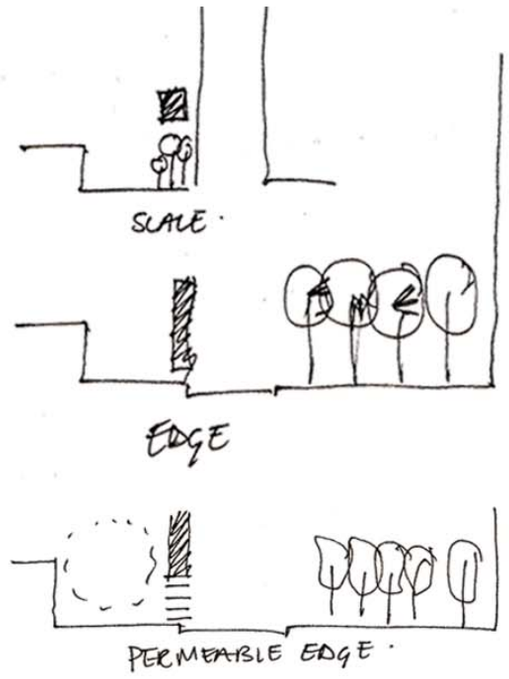
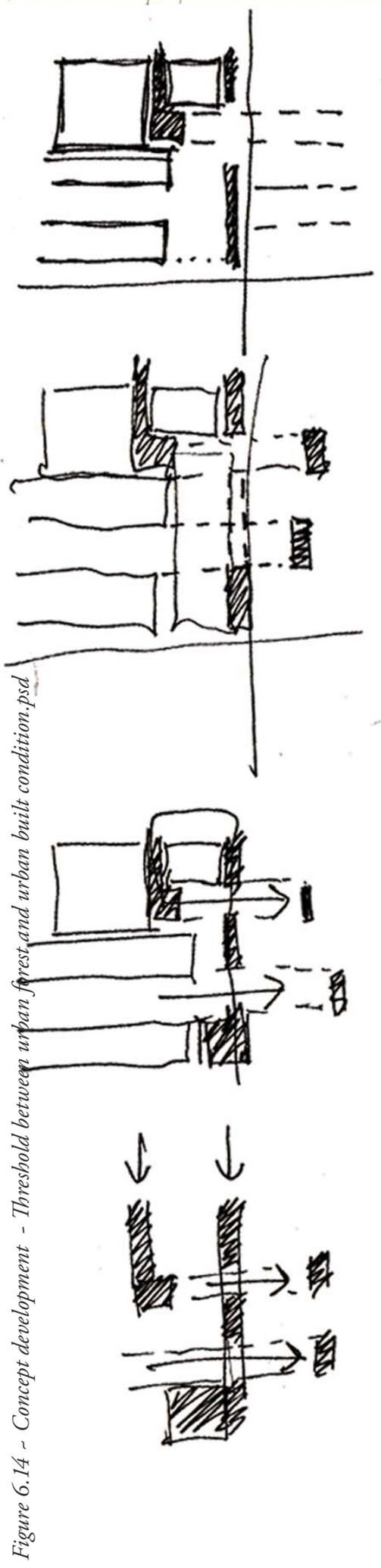


Figure 6.13 ~ Explorations for illuminating the basement.psd







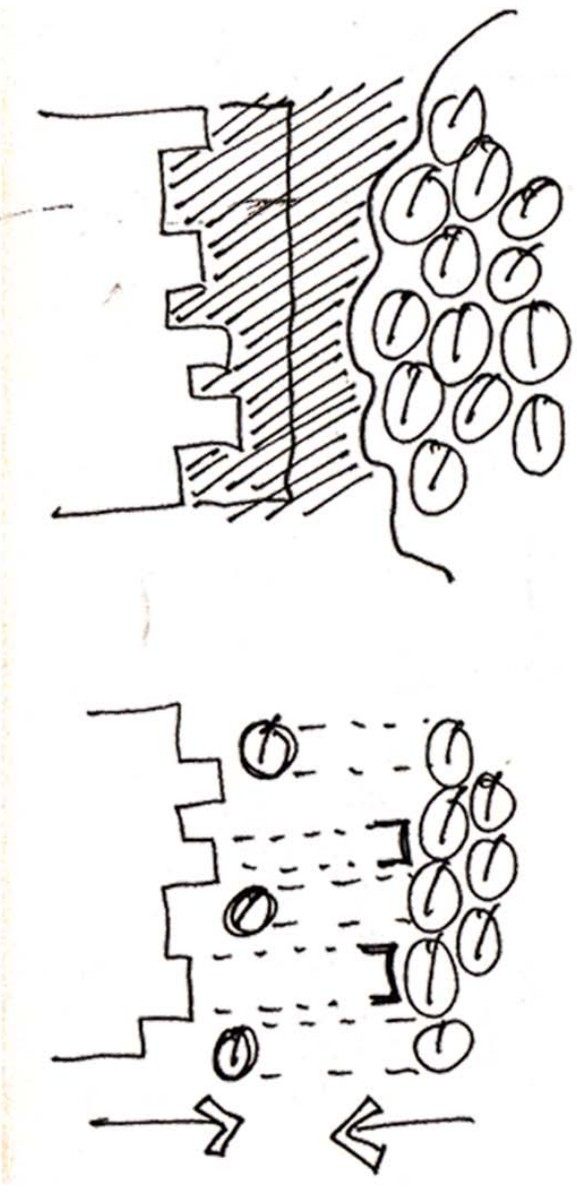
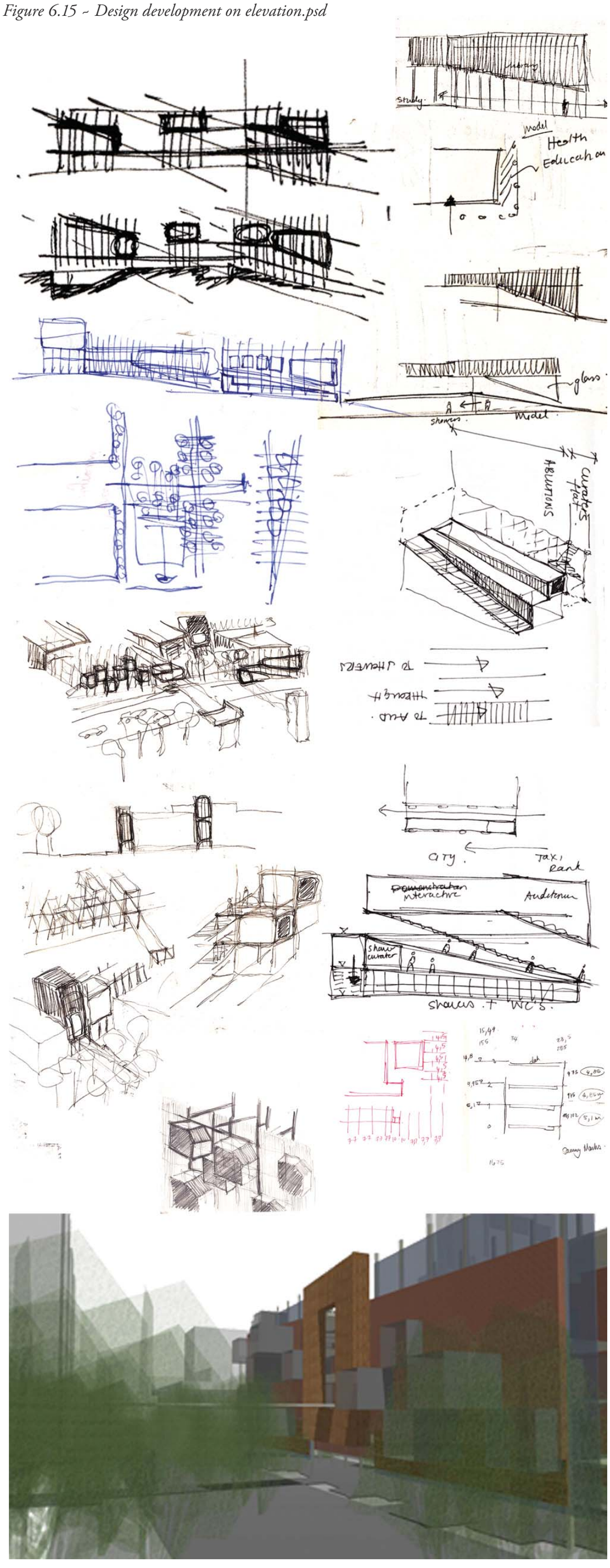


Figure 6.14 ~ Concept development - Threshold between urban forest and urban built condition.psd

Figure 6.15 ~ Design development on elevation.psd



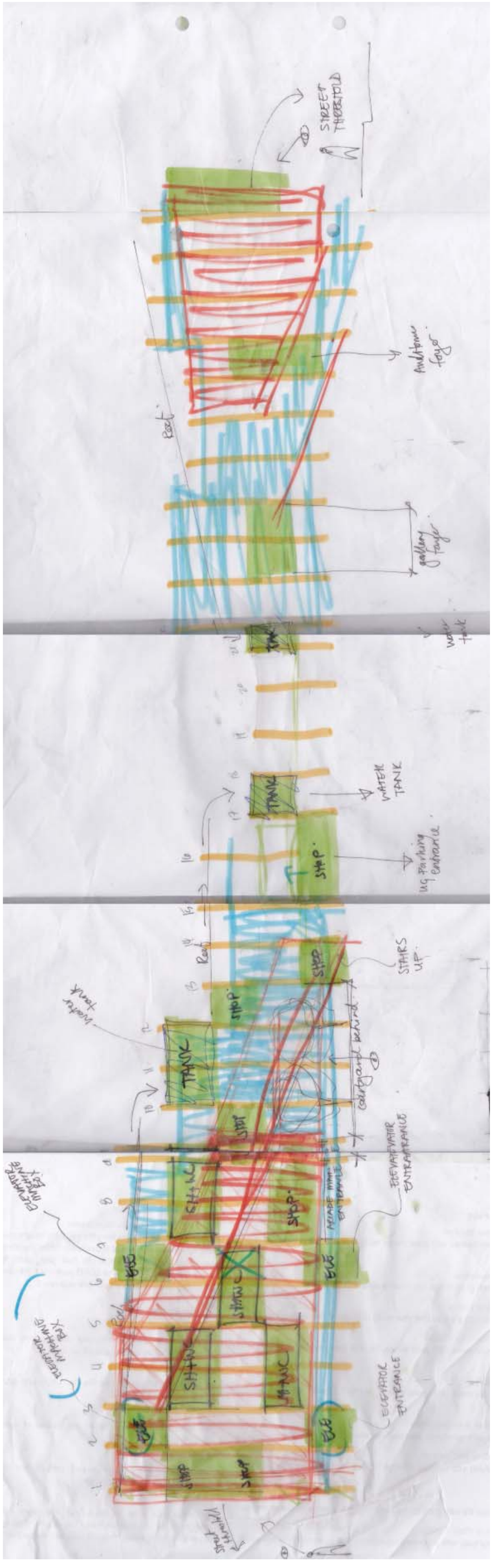
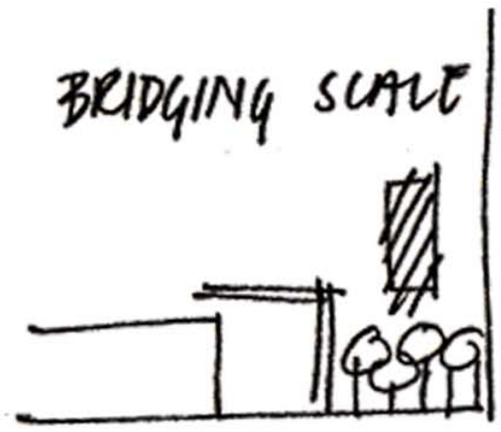
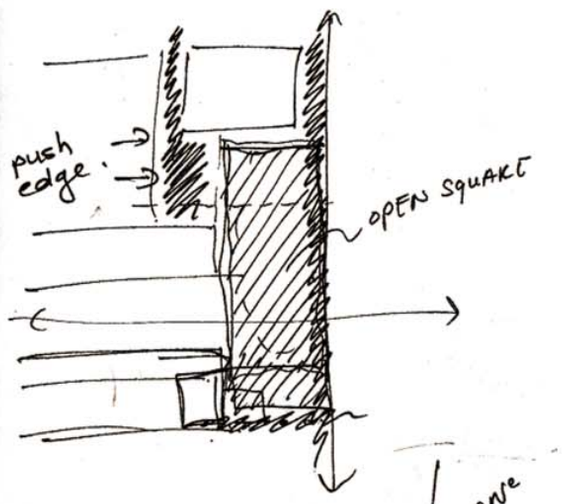
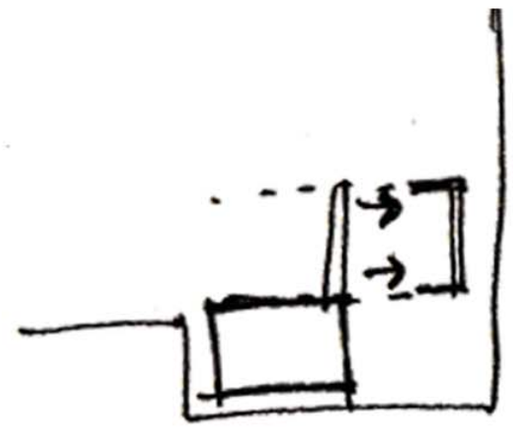
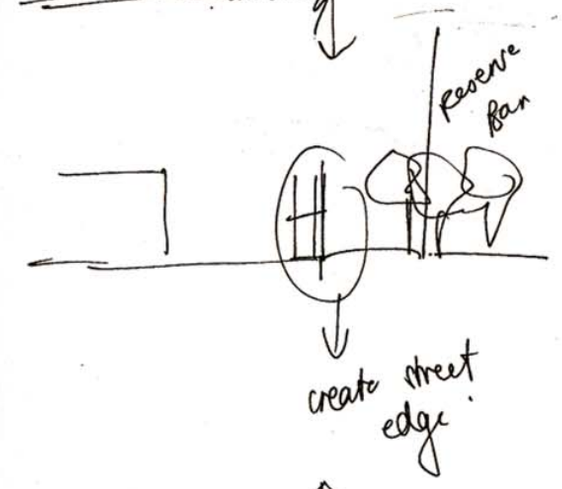


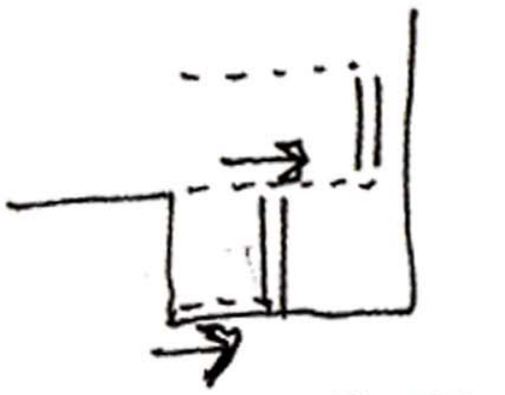
Figure 6.16 ~ Programme development on elevation.psd

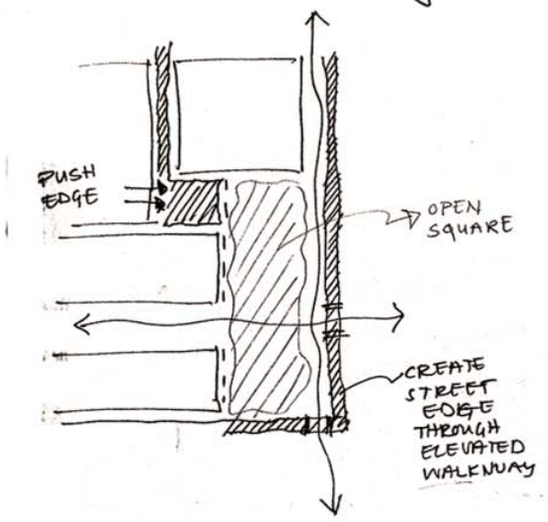




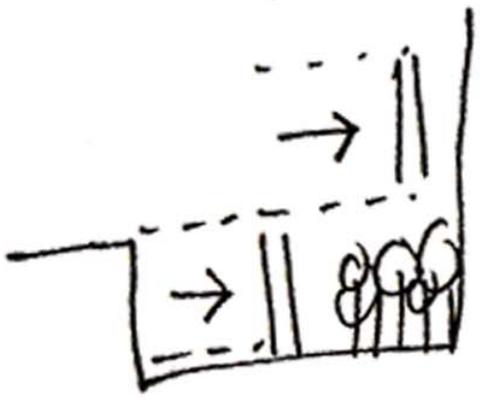


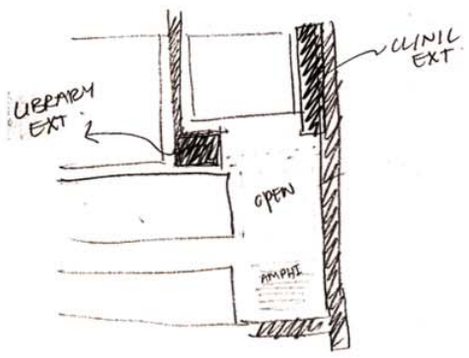


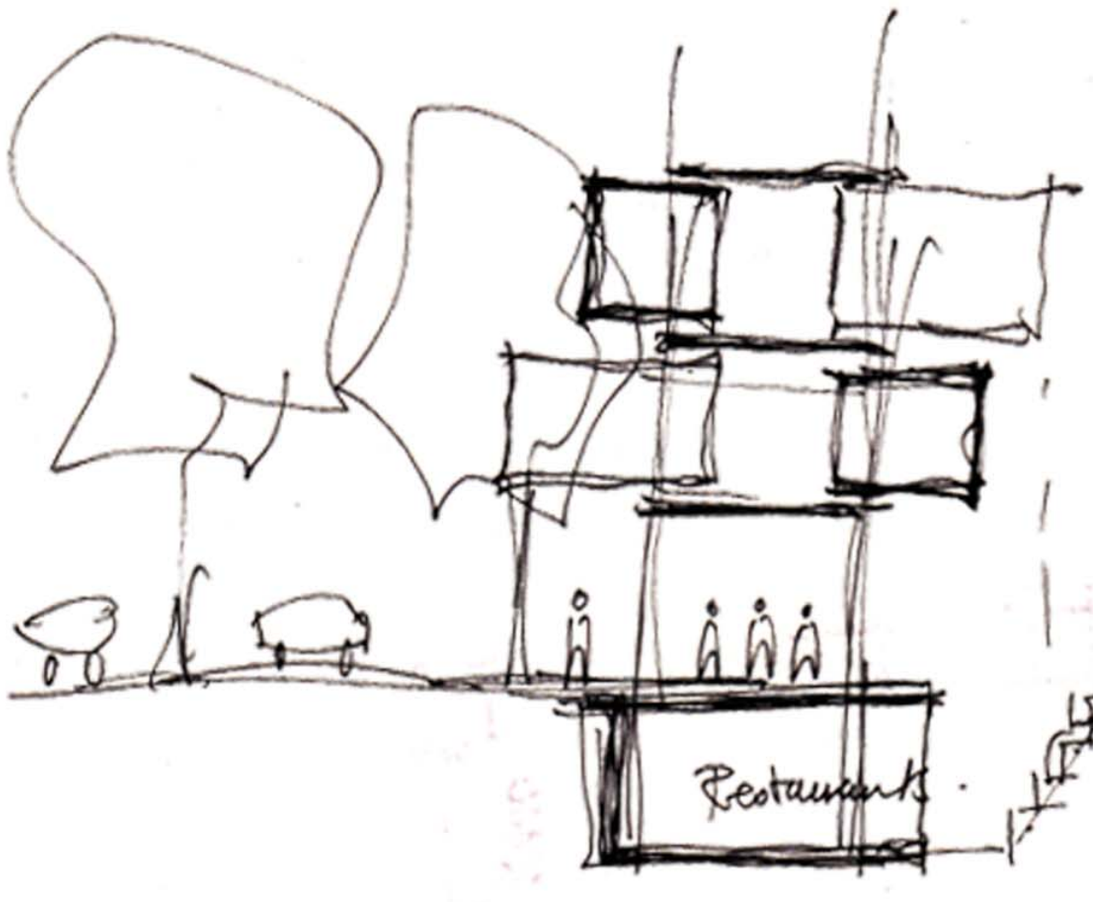




MOVING EDGES.







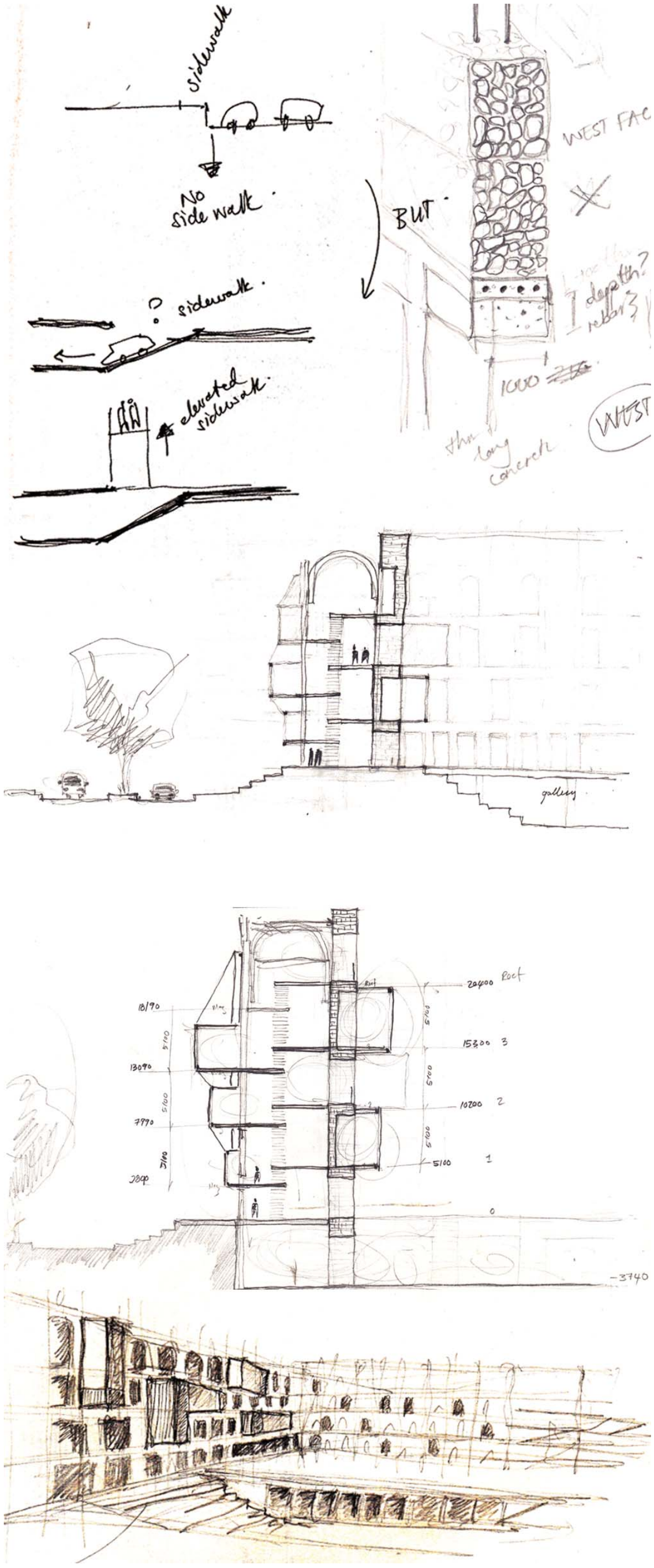


Figure 6.18 ~ Design development on section.psd

Threshold between urban built and urban forest

Process and development

The intervention needs to downplay the design of the existing. This design will lend the new architecture the material freedom to contrast the current architecture. The structure must weave its way through and around the existing. It must connect otherwise unconnected programmes and break the boundaries between the inaccessible and unrelated buildings. It must create positive interaction between the existing buildings. At some places it should merge with the existing and at other places it should contrast it. This balance between the familiar and the new will make it accessible and visible.

The intervention as a whole will serve as a stoep into the city. Due to its location, en route to the major transport terminals, it becomes a programmatic threshold between the dweller's home and the city. And due to its location in the larger urban vision it becomes a tectonic threshold between the man-made forest around the Reserve Bank and the man-made city to the west.

The use of a columned structure is therefore very appropriate. An architectural language of columns not only mimics the stoep, a common vernacular typology of Pretoria, it also strengthens the idea of a colonnade – a reference to gathering spaces of antiquity. A colonnade creates a permeable edge that defines the public square and creates structure for informal commercial activities.

Pretoria's arcade typology is also strengthened by the intervention. Existing arcades are kept and new ones are created. Moreover, arcades will not only stop at ground level. New arcades at higher levels are created with programmes that will enhance the existing.

The appealing rhythms on site of the Gundelfinger building will inform the grid and hence the rhythms of the new structure.

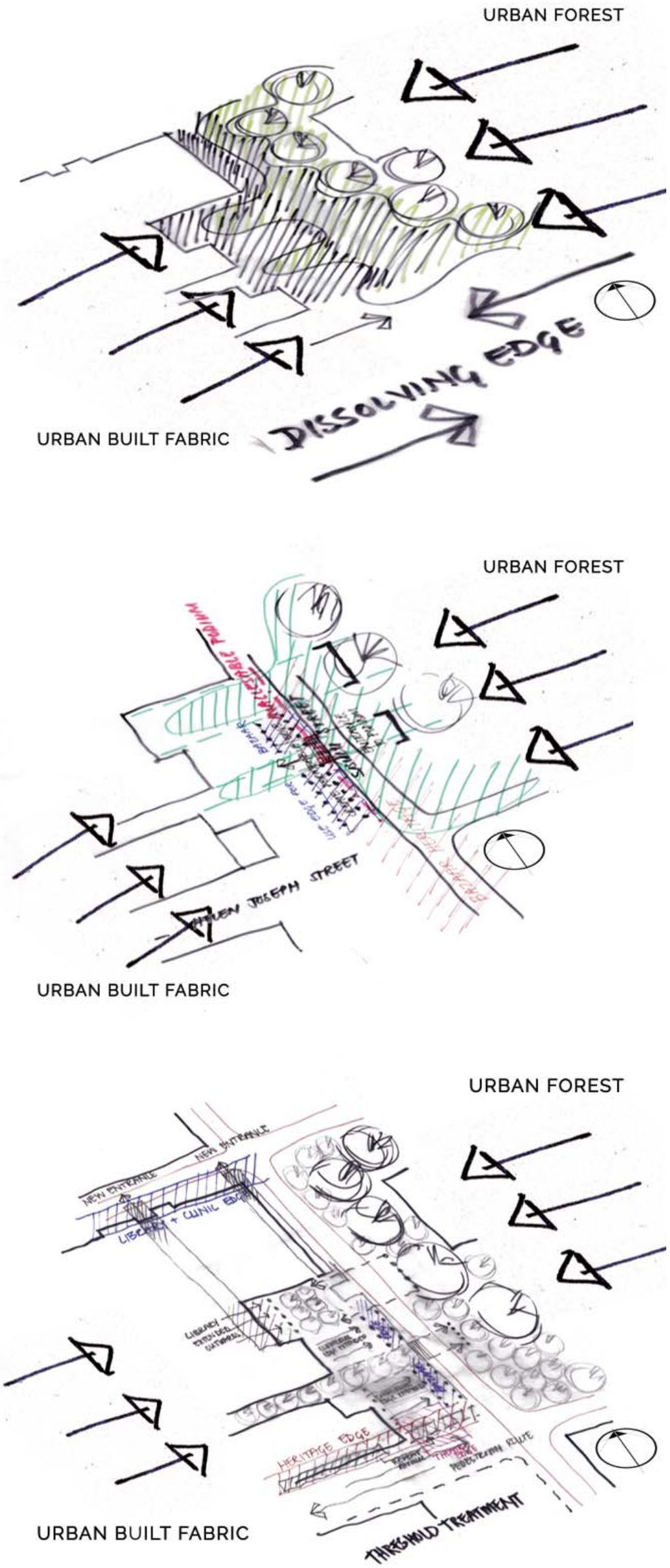


Figure 6.19 ~ Concept diagrams - Edge and threshold between Urban Built and Urban Forest.psd

The diagrams explains the site as becoming the threshold between the urban forest condition and the urban built condition. The middle image explains that an edge needs to be created to contain the new square and this edge becomes the point at which the two conditions meet. It also establishes that the edge must have permeability for the two opposing conditions to interact. The bottom image deals with the threshold of each of the programmes on site and how they should be addressed.

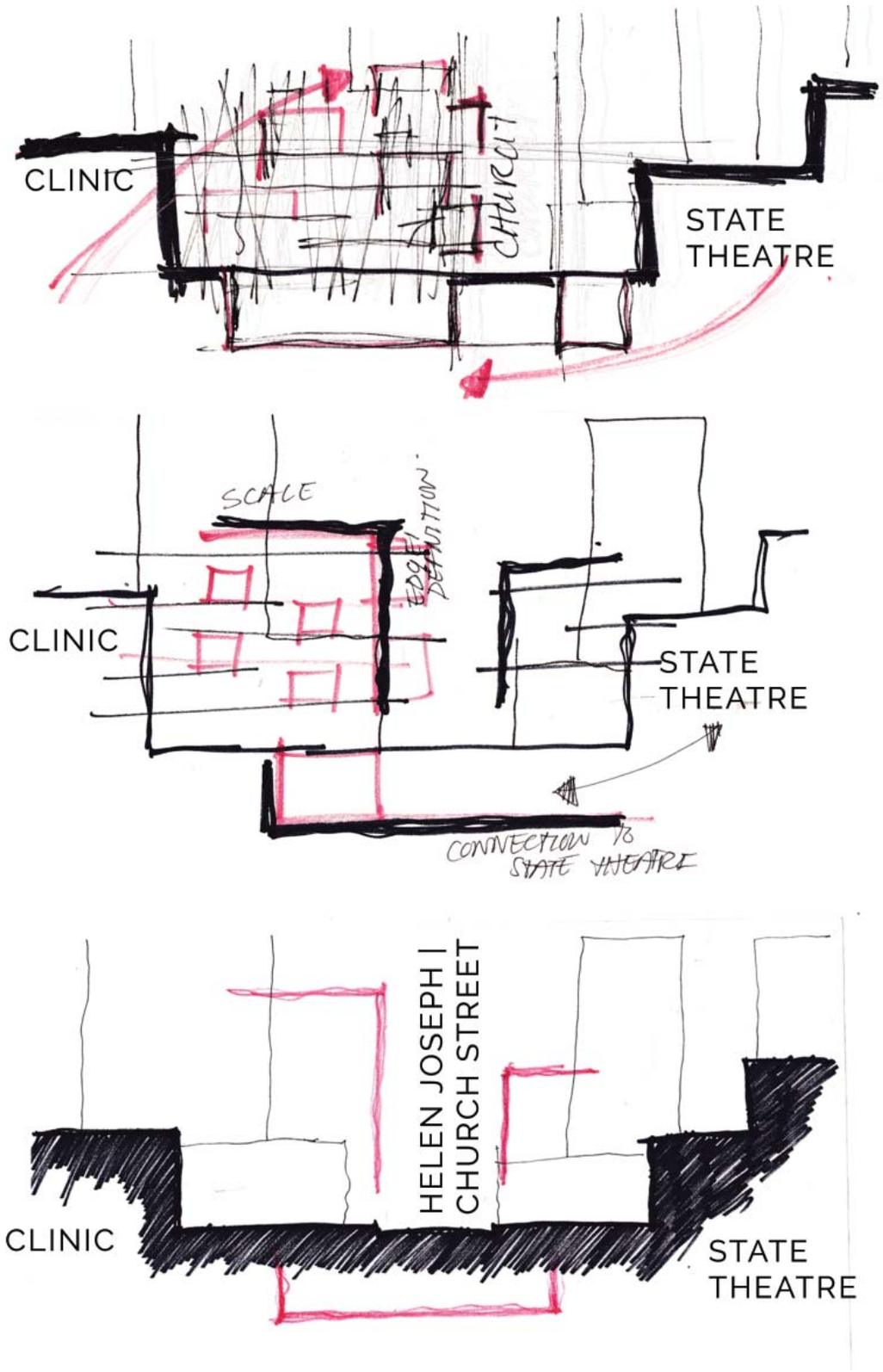


Figure 6.20 ~ Concept development on north-south section.psd

The diagrams explains the site as becoming the threshold between the urban forest condition and the urban built condition. The middle image explains that an edge needs to be created to contain the new square and this edge becomes the point at which the two conditions meet. It also establishes that the edge must have permeability for the two opposing conditions to interact. The bottom image deals with the threshold of each of the programmes on site and how they should be addressed.

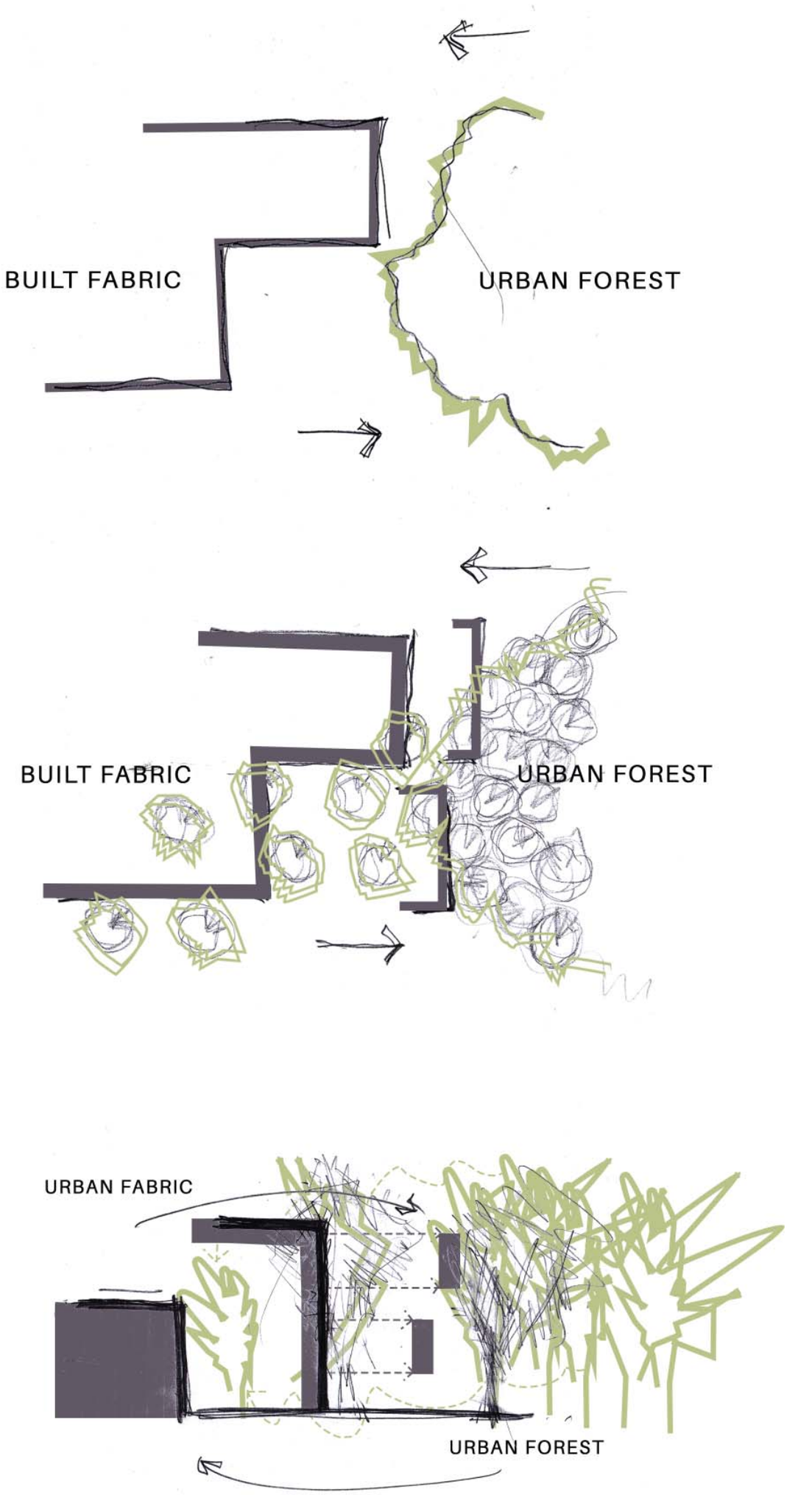


Figure 6.21 ~ Concept diagram - Urban Built versus Urban Forest.psd

These diagrams indicate the intention on the east-west section. The site becomes the threshold between the urban forest and the urban built fabric. As the forest dissolves into the city the city condition pushes itself into the urban forest.

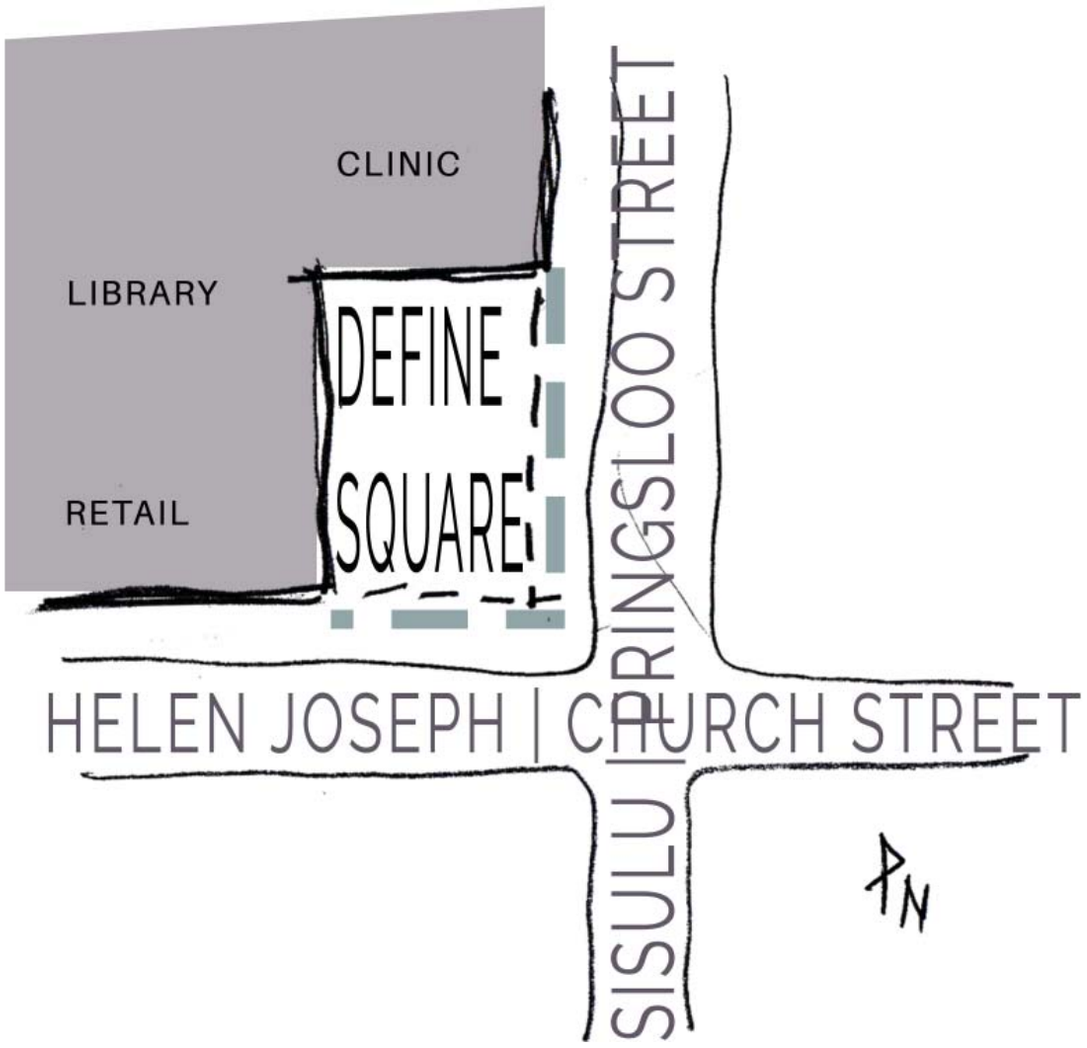


Figure 6.22 ~ Concept diagram - Define public square.psd

This diagram indicates the intention of creating a defined space that can become a public square. The site is currently a fenced off, forgotten construction site with no sense of place. It is therefore important to create an edge around the site to contain the space. This edge will serve as a colonnade from this stoep into the city.

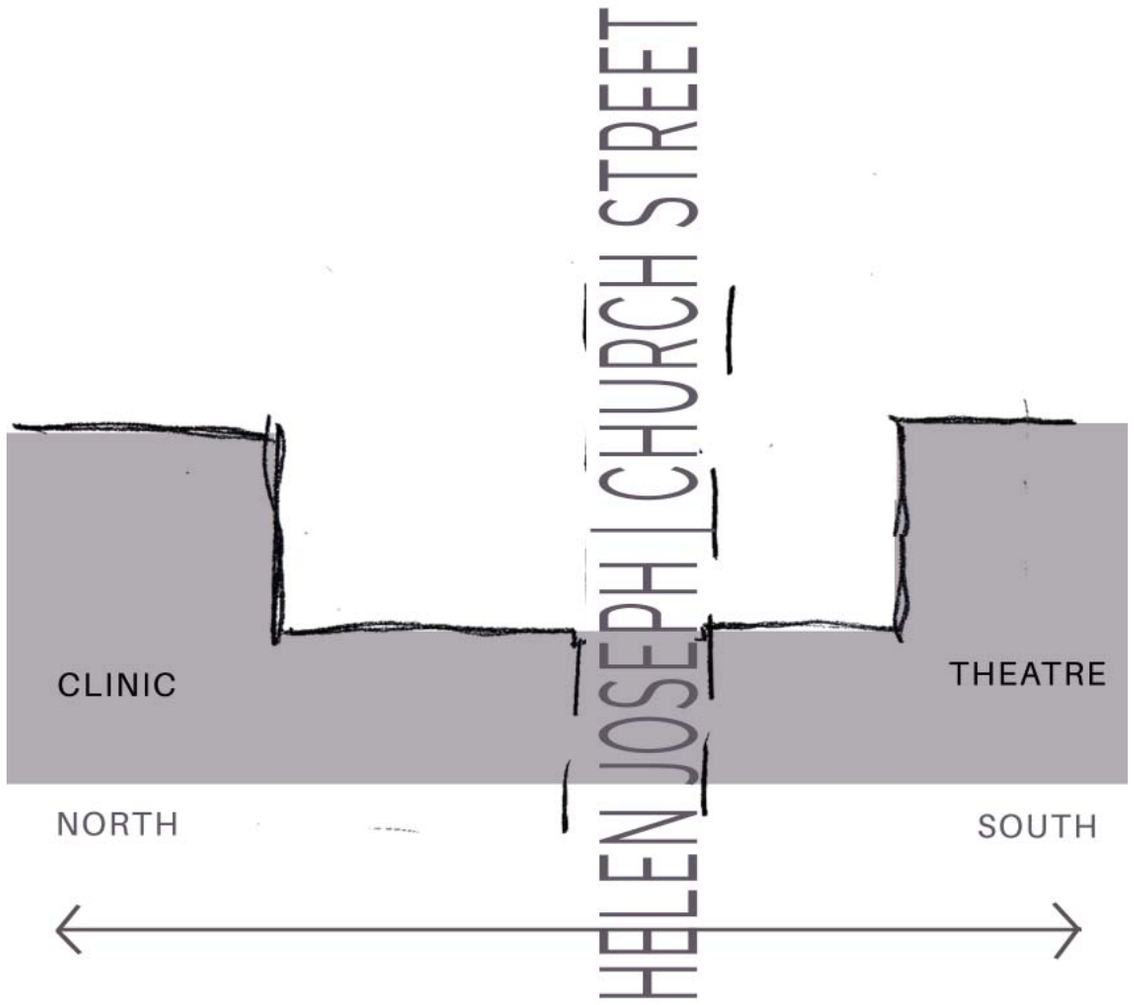


Figure 6.23 ~ Concept diagram - Helen Joseph (Church) Street axis.psd

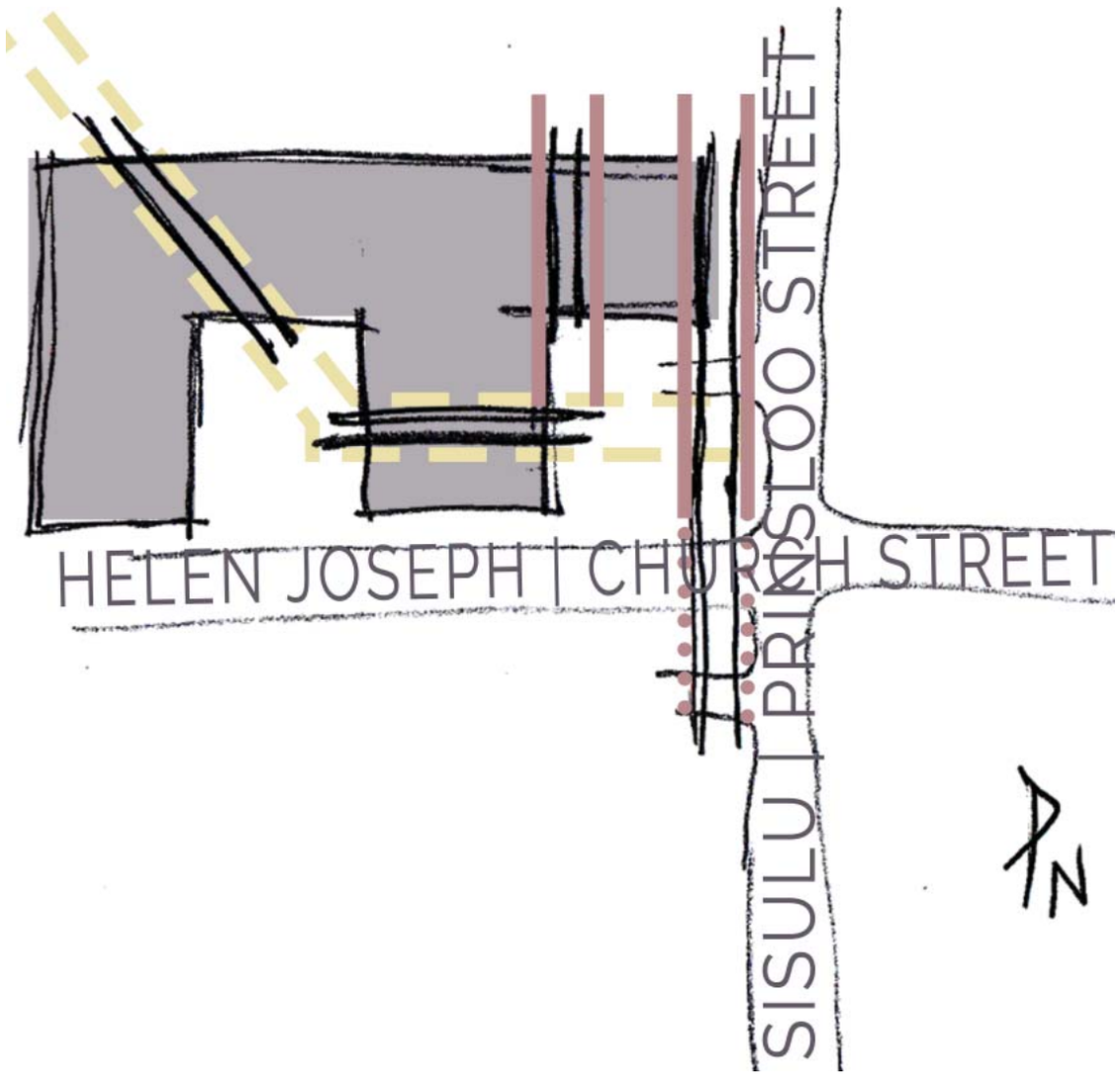


Figure 6.25 ~ Concept diagram - Define existing and new arcades.psd

This explains that the existing arcade is kept and extended and a new arcade between the library and the clinic is added. The edge of the site also serves as a colonnaded entrance to the square, but also as an arcade with programmes spilling off from it.

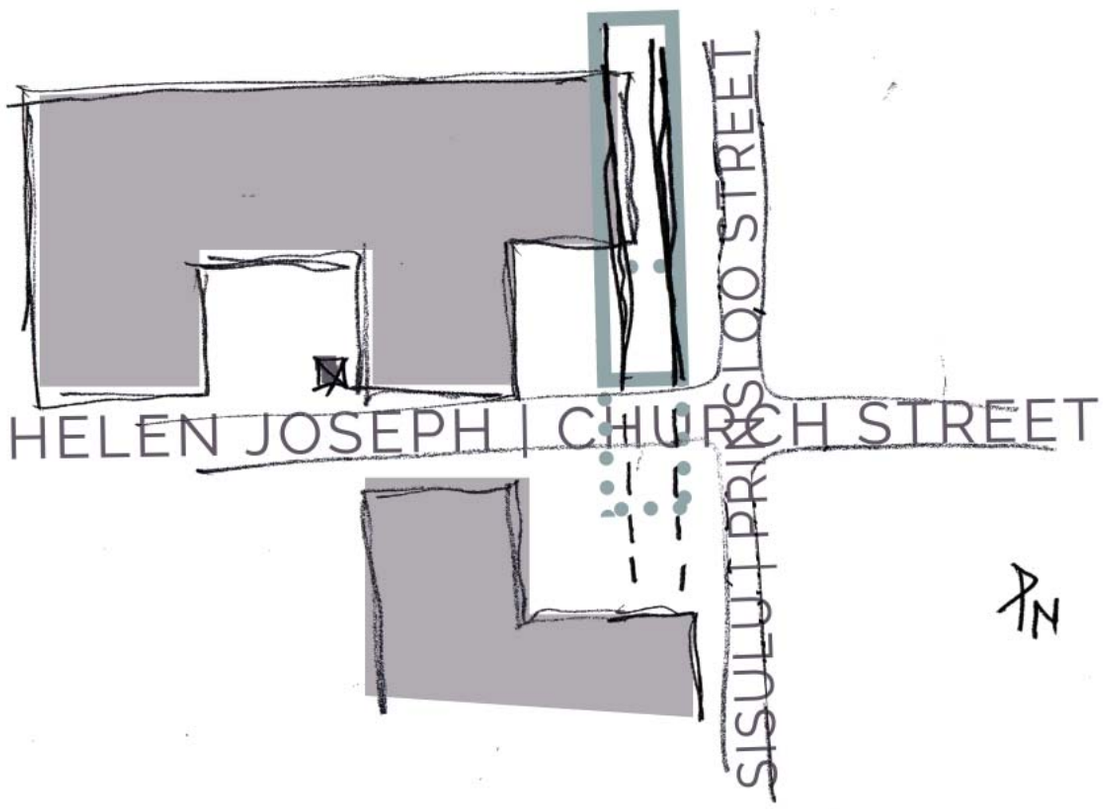


Figure 6.24 ~ Concept diagram - Underground connection to theatre.psd

Helen Joseph (Church) Street is a very prominent street in the history of South Africa as discussed in previous chapters. It is therefore important to keep the street visually uncluttered. As mentioned earlier, any connection to the State Theatre should be done underground.

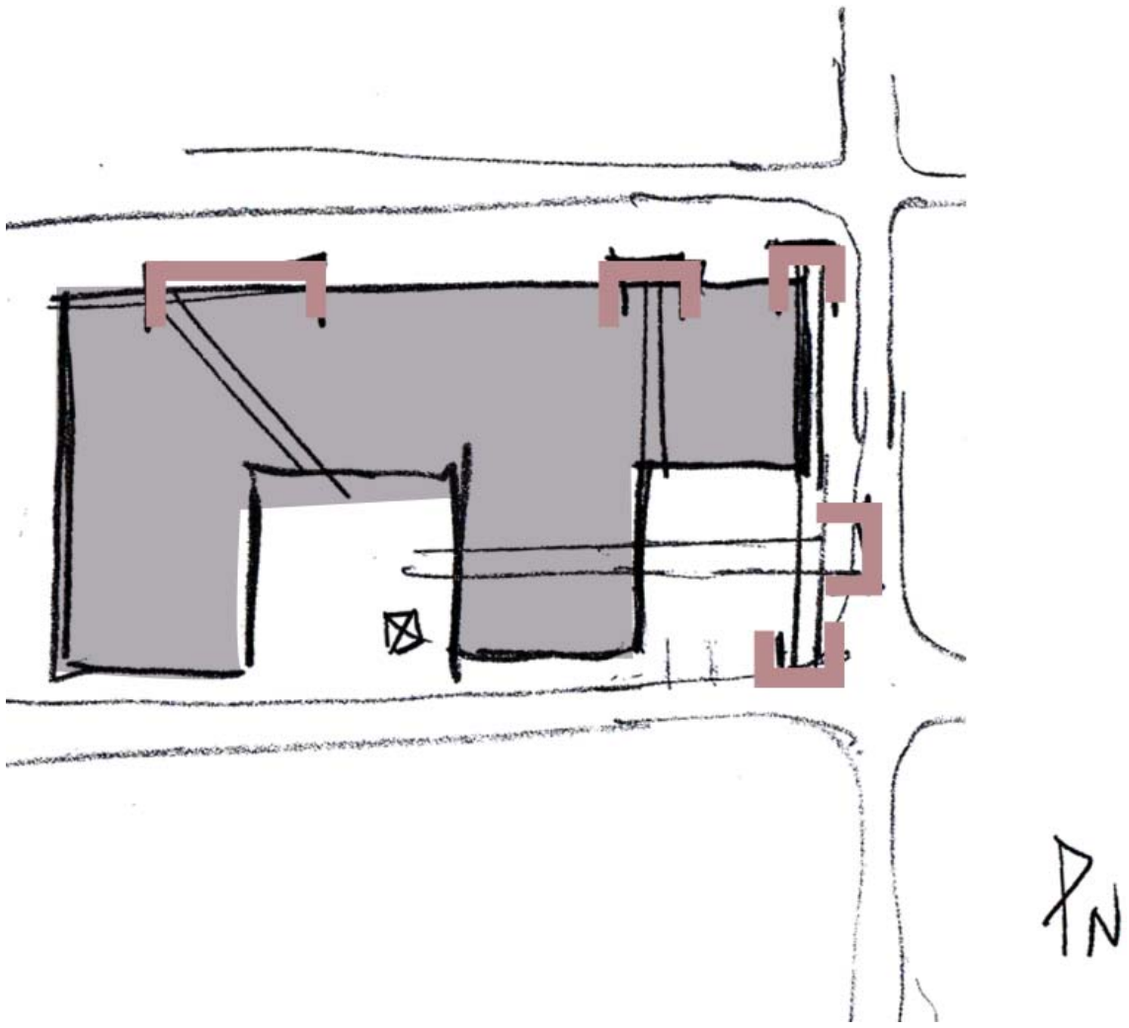


Figure 6.26 ~ Concept diagram - Define new entrances.psd

New entrances to the library and clinic are added to the north and the existing and new arcade also has definite thresholds.

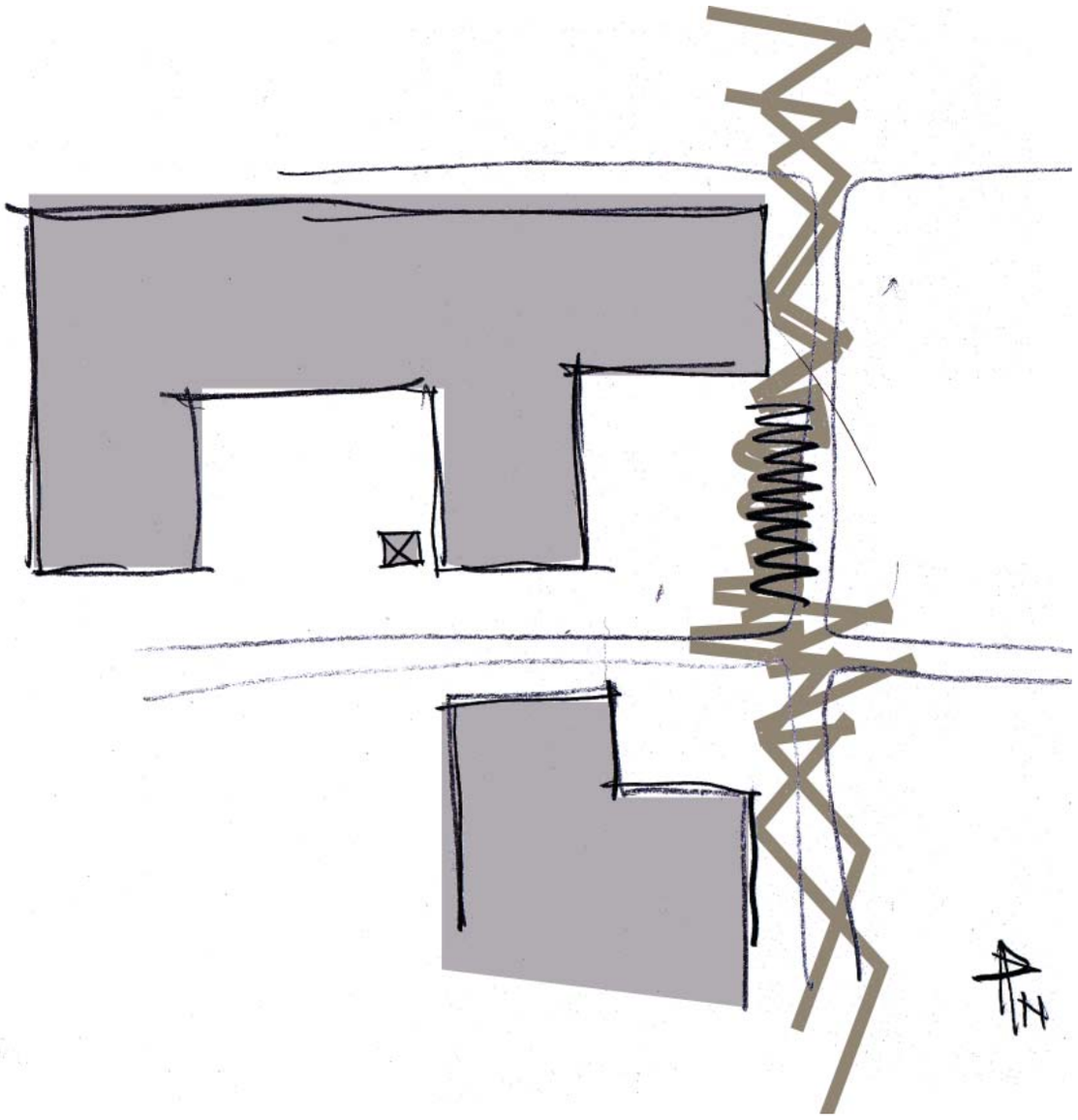


Figure 6.28 ~ Concept diagram - Significance towards historic Asiatic Bazaar.psd

The importance of reclaiming the energy previously generated by the Asiatic Bazaar is illustrated.

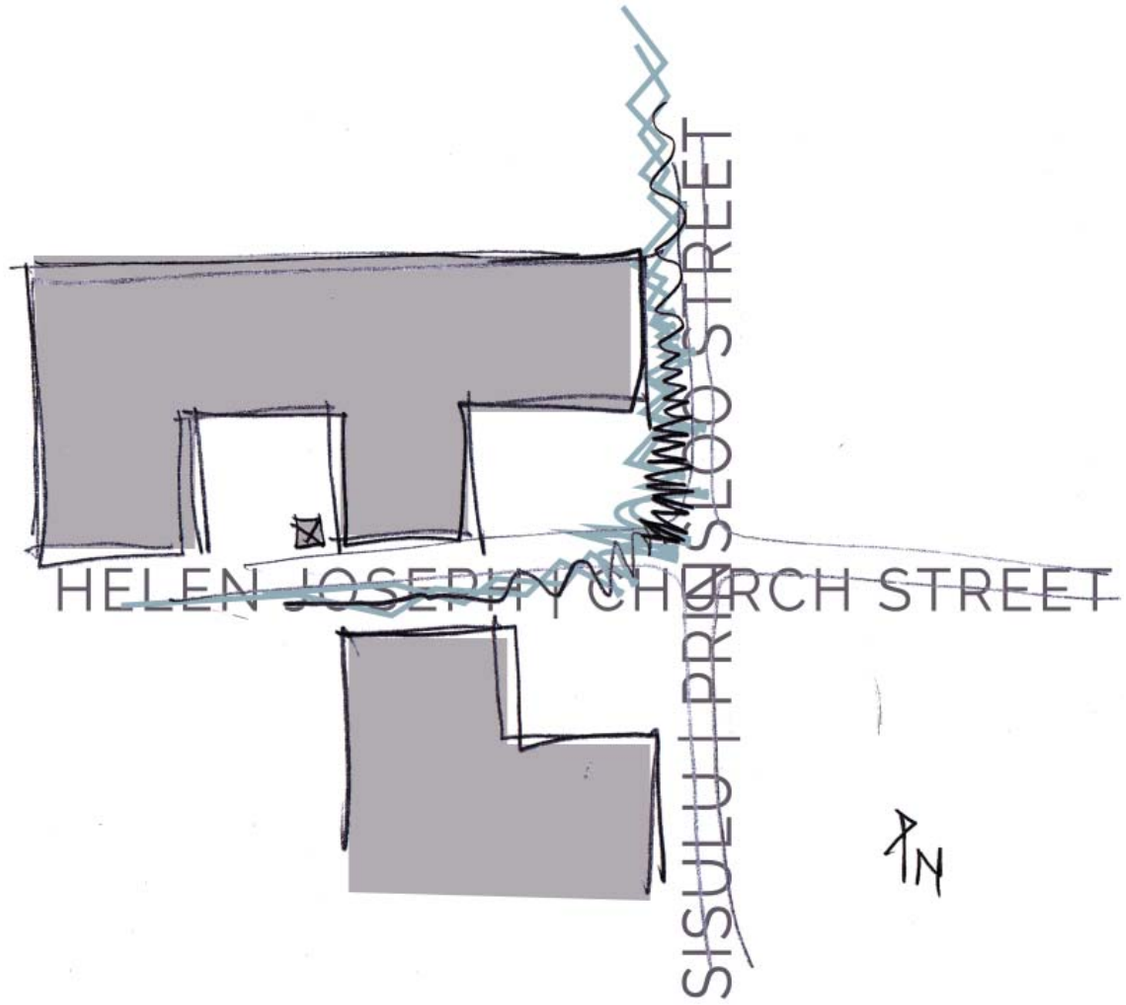


Figure 6.29 ~ Concept diagram - Significance towards historic water furrows.psd

This illustrates the route of the water furrows and where it will have greatest the influence on the site.

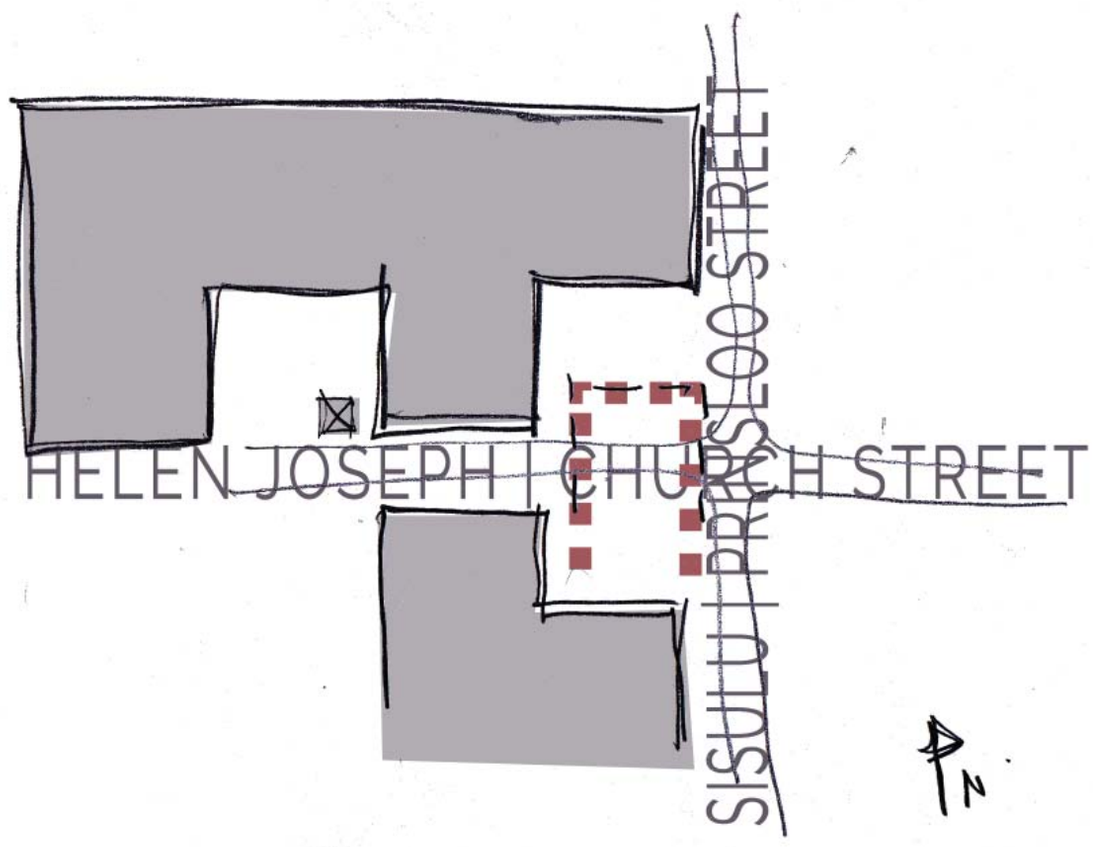


Figure 6.27 ~ Concept diagram - Site connection with theatre.psd

The most appropriate site for the open air amphitheatre is indicated. It connects with the State Theatre via the basement.

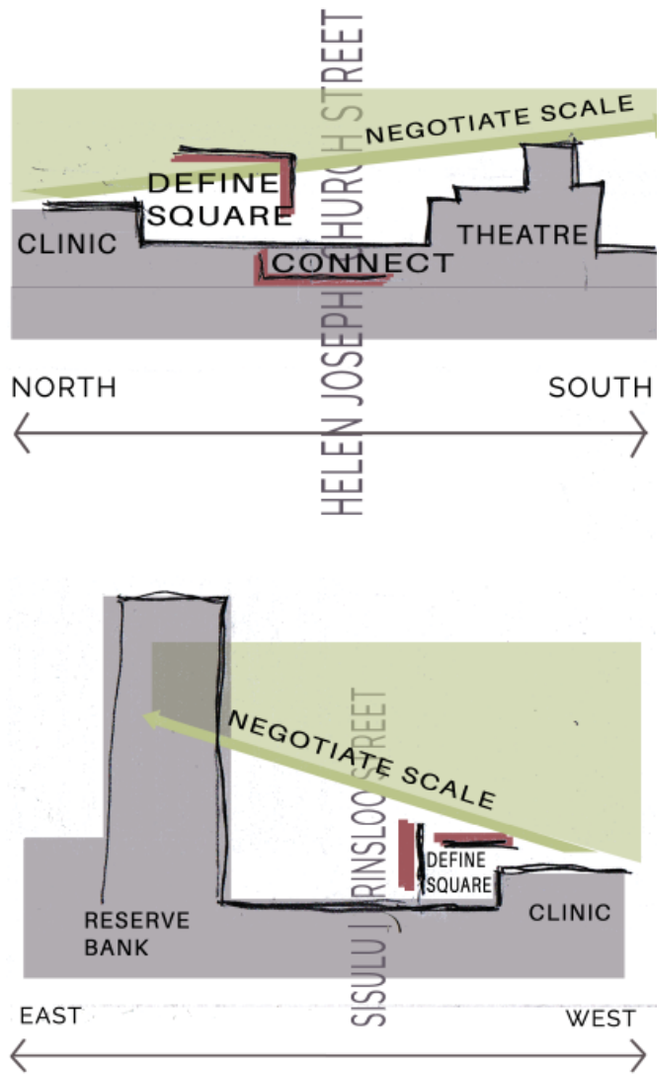


Figure 6.30 ~ Concept diagram - Scale and space definition.psd

As discussed in the previous chapter the new intervention will not try to bridge the scale with the Reserve Bank, but instead attempt to tie in with the scales of this historic part of Pretoria. It will therefore aim to match the scale of the State Theatre.

These diagrams, and consequent model explorations, explain the main drivers of the design. Of the site conditions more were however integrated in the design. These will be discussed in more specific terms in the section on design responses.

DESIGN RESPONSES

The site has a rich and complex narrative and became the main driver for the architecture. The design responds to the existing programmes by allowing the programmes to spill out of the existing buildings and into the street. It also responds to the buildings by attaching to them and extending their boundaries, as well as creating new alternative entrances. The materiality of the site is another driver and allows for the recognition of the familiar and the visibility of the new. The pedestrian circulation in the CBD is also responded to. It is programmatically strengthened and aesthetically articulated. The design finally responded to the environmental conditions by focussing on the smart treatment of western and eastern façades, as well as water harvesting methods. These responses will be discussed henceforth.

Programmatic Responses

The programmes responded to include the library, the clinic, the theatre and retail.

Library

As part of the greater urban vision the library falls under the civic precinct with the new Tshwane House and the existing clinic. The eastern façade of the library faces the site of intervention. On the ground floor of the library a café and a music library can be designed to spill out onto a newly designed library courtyard. It will also serve as an alternative entrance into the library.

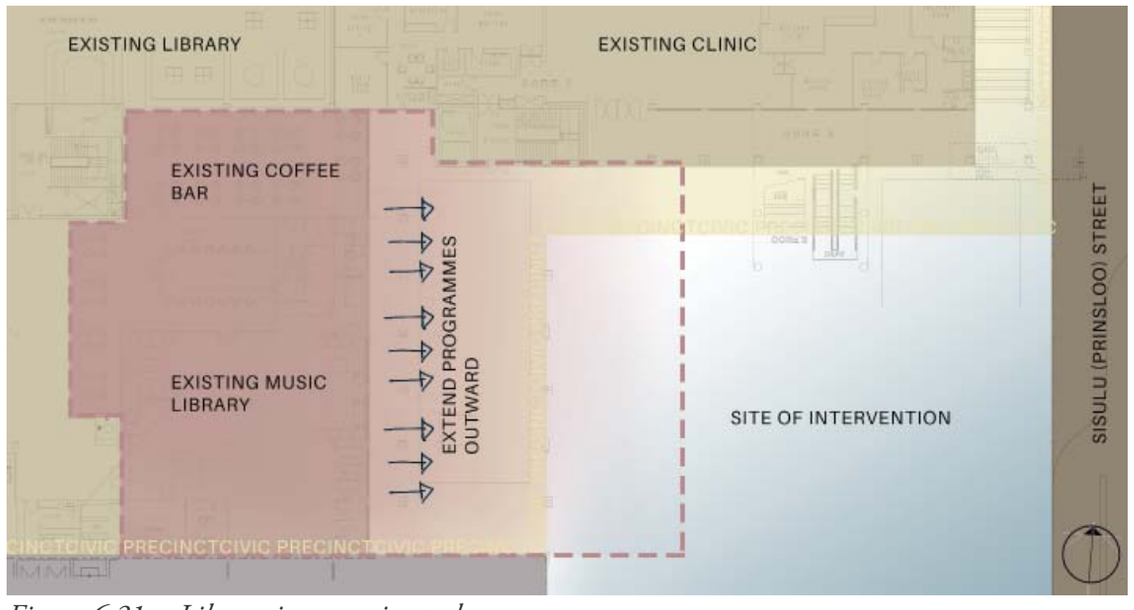


Figure 6.31 ~ Library intervention.psd

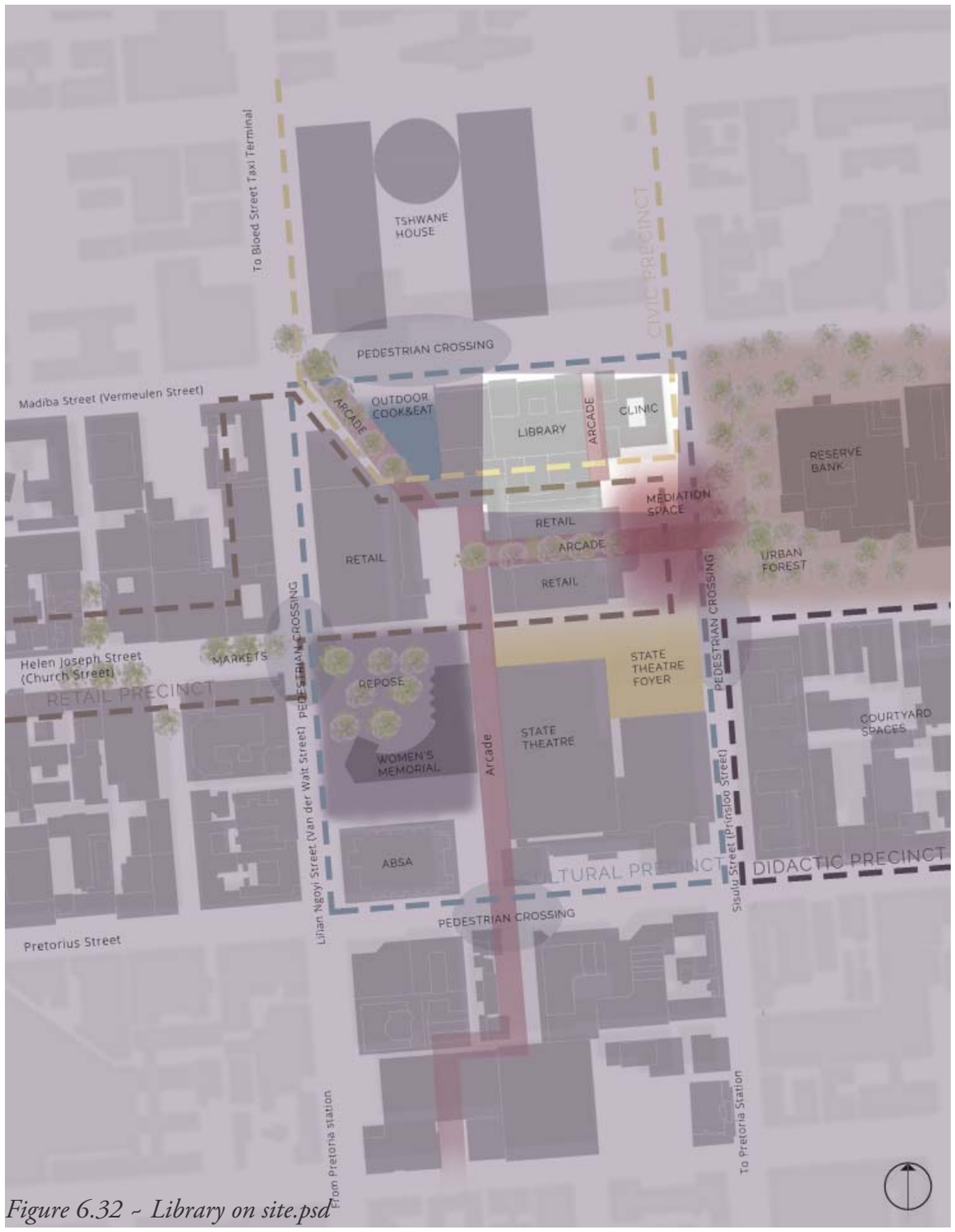


Figure 6.32 ~ Library on site.psd

A café and a music library designed to spill out onto a shaded courtyard.

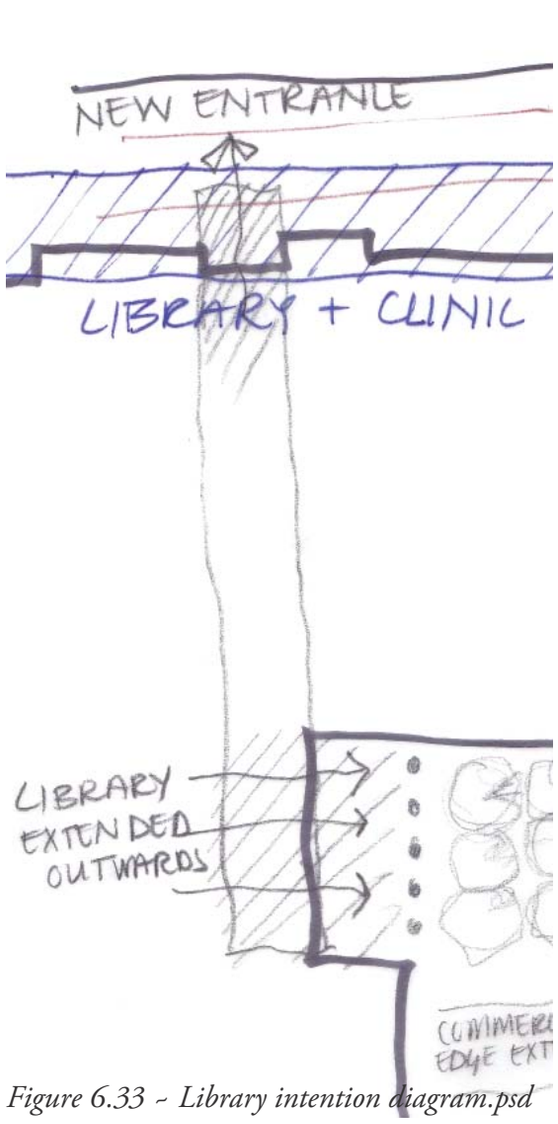


Figure 6.33 ~ Library intention diagram.psd

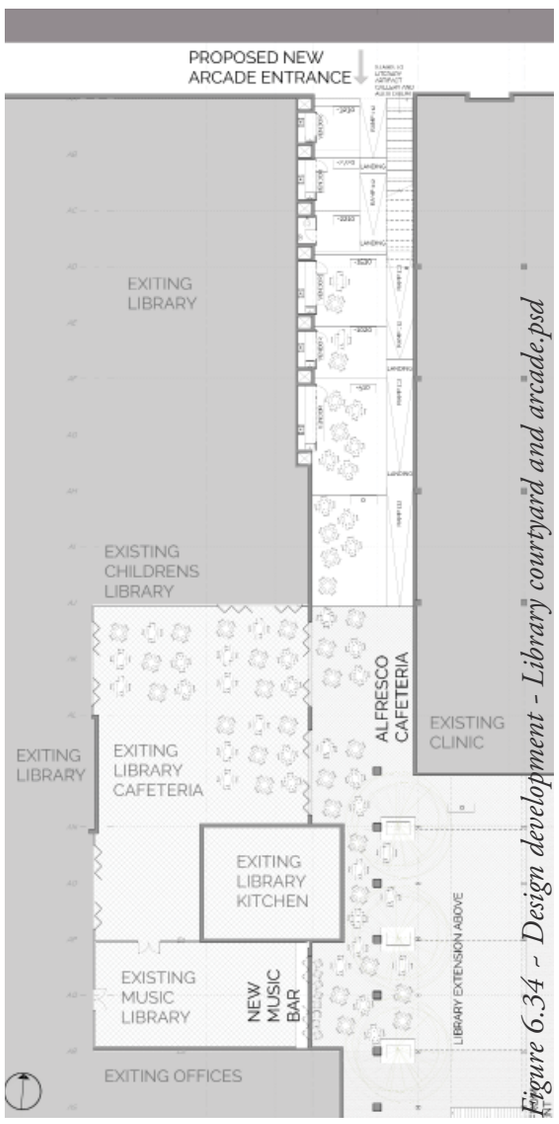


Figure 6.34 ~ Design development - Library courtyard and arcade.psd

Figure 6.35 ~ Clinic on site.psd

Clinic

The existing clinic's entrance on the ground floor is not visible and unobtrusive. The suggestion is to create a new entrance to the north where it meets the corner of Madiba (Vermeulen) and Sisulu (Prinsloo) Streets. It is also a very busy pedestrian route and will be more visible and accessible. The existing corridor next to the clinic can also be re-appropriated to include auxiliary programmes for the clinic.

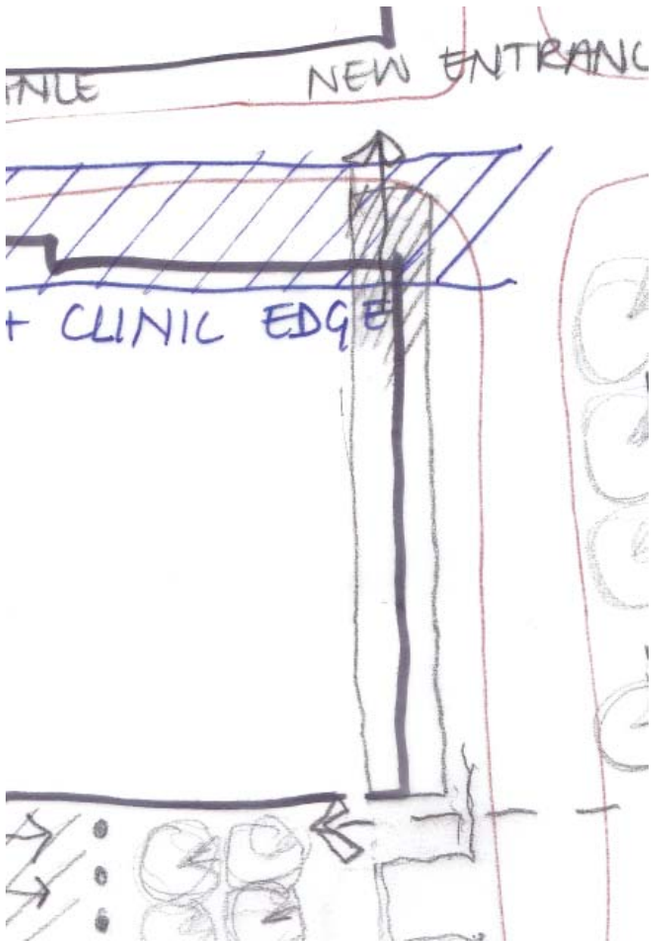


Figure 6.36 ~ Clinic intention diagram.psd

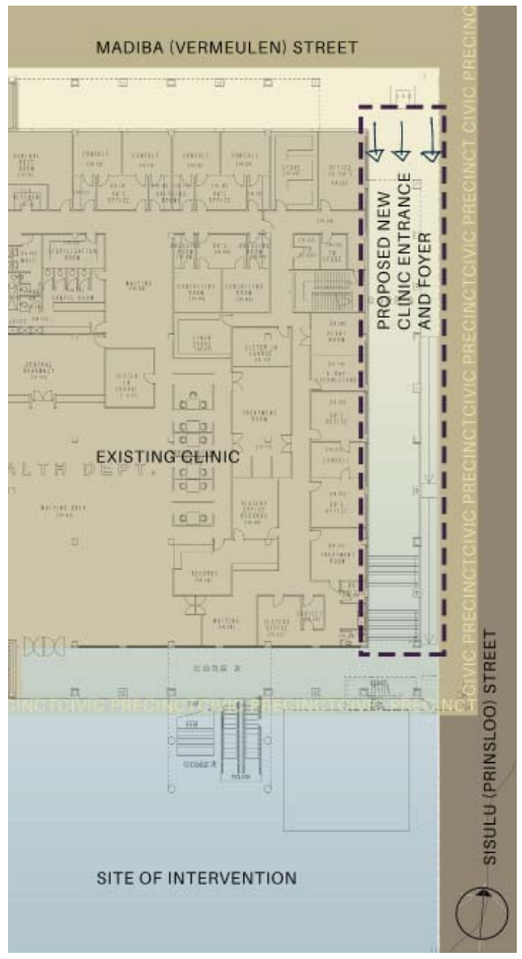


Figure 6.37 ~ Clinic intervention.psd

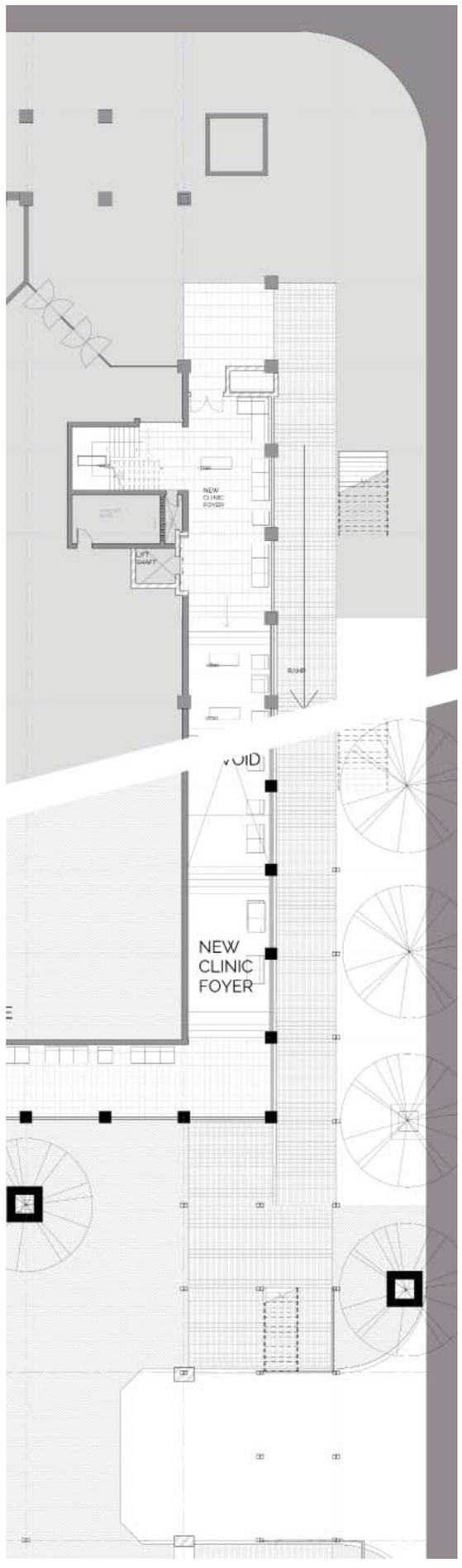


Figure 6.38 ~ Design development - New entrance and foyer to clinic.psd

Theatre

As part of a greater cultural precinct the theatre's extension beyond its physical walls are paramount. In the urban vision, the extension of the State Theatre was suggested by zoning the area in front of it as the foyer to the State Theatre, and for future interventions to use this new space to connect the State Theatre to the street. The basements of State Theatre and the Sammy Marks Centre are currently not connected, but the intention is to connect it and to augment the programme of the State Theatre with an outdoor amphitheatre. This amphitheatre will then be accessible via the basement parking of both the State Theatre and the Sammy Marks Centre.

Figure 6.39 ~ Theatre on site.psd

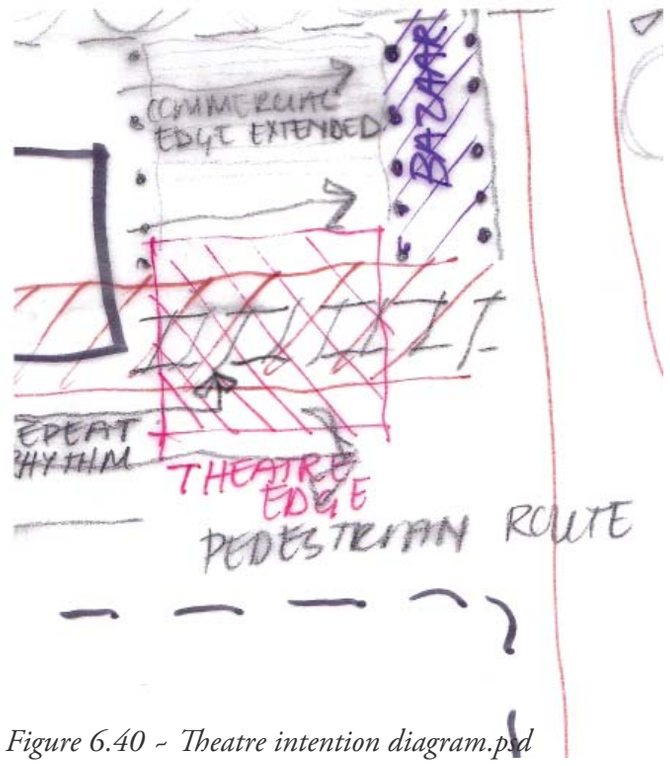


Figure 6.40 ~ Theatre intention diagram.psd

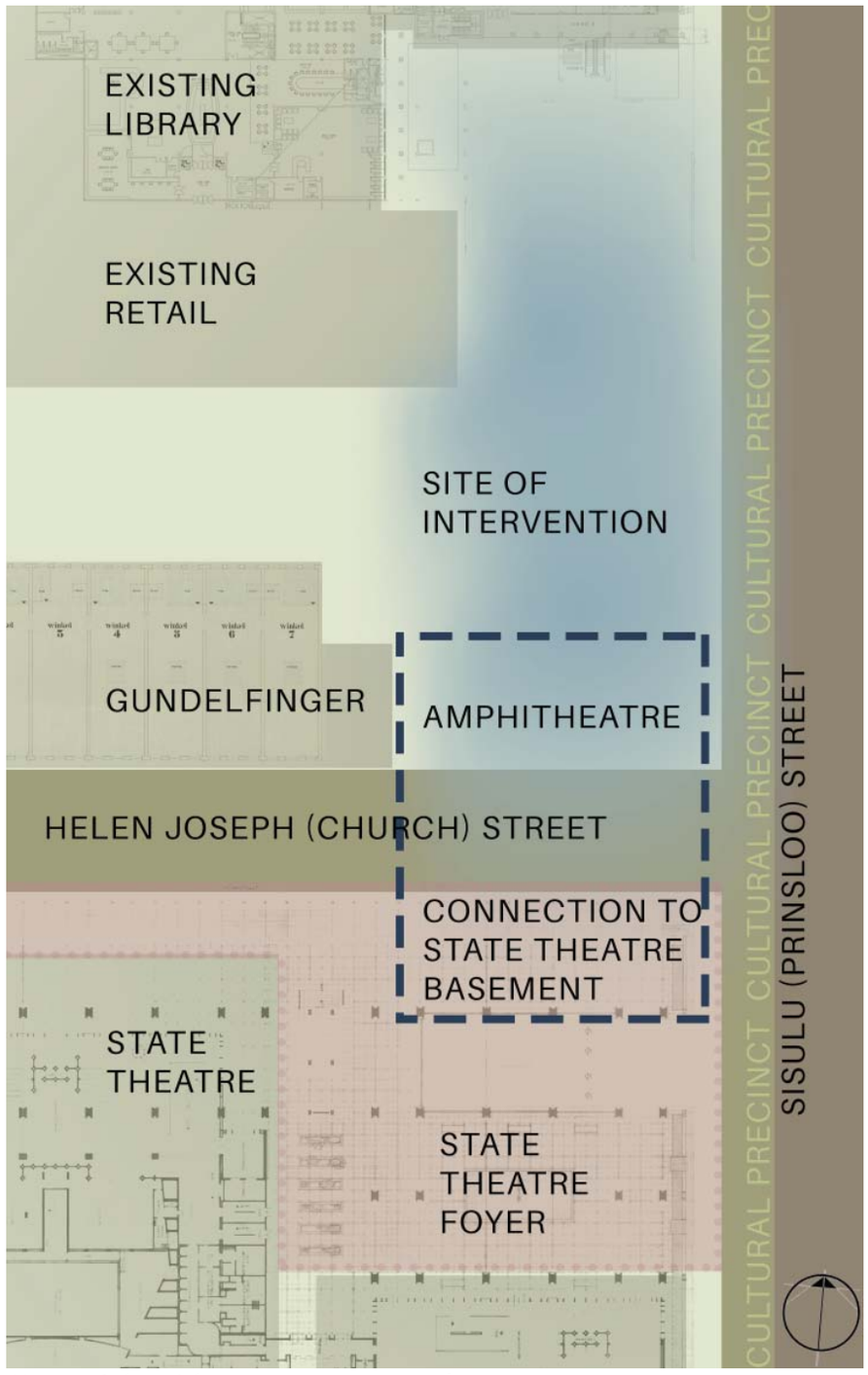


Figure 6.41 ~ Theatre intervention.psd

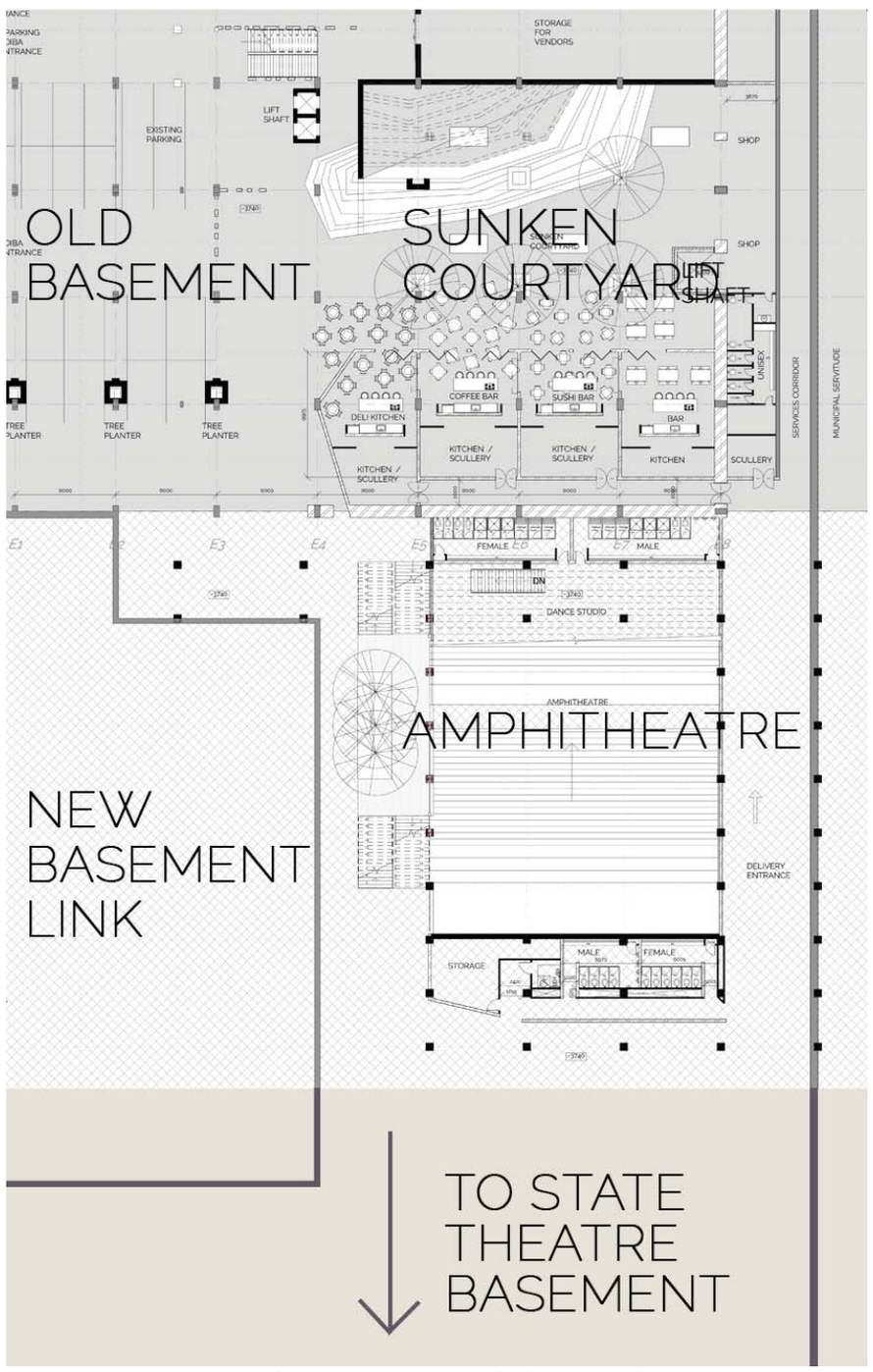


Figure 6.42 ~ Design development - Amphitheatre.psd

Retail

As discussed in the historical conditions of the site, Sisulu (Prinsloo) Street used to be a vibrant shopping street. Unfortunately the historic condition was lost. However the resilience of the informal vendor makes it possible to restore this condition. The informal vendors claim the street edges wherever there is the possibility of pedestrian traffic. This approach can be capitalised on. The site is situated on route from Bloed Street Taxi Terminal to Pretoria Station. It is therefore ideal to form a supporting structure for vendors.

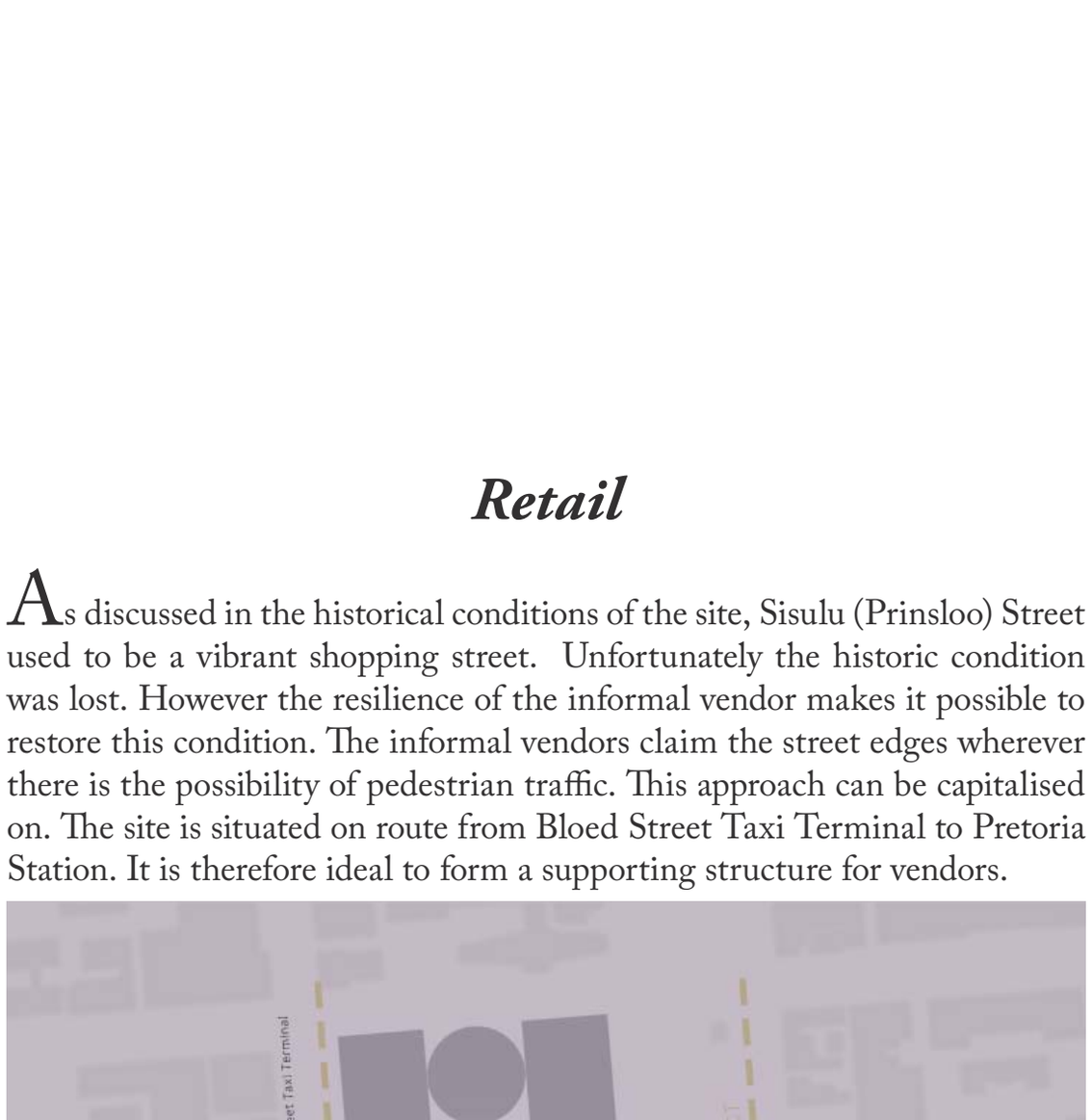


Figure 6.43 ~ Retail on site.psd

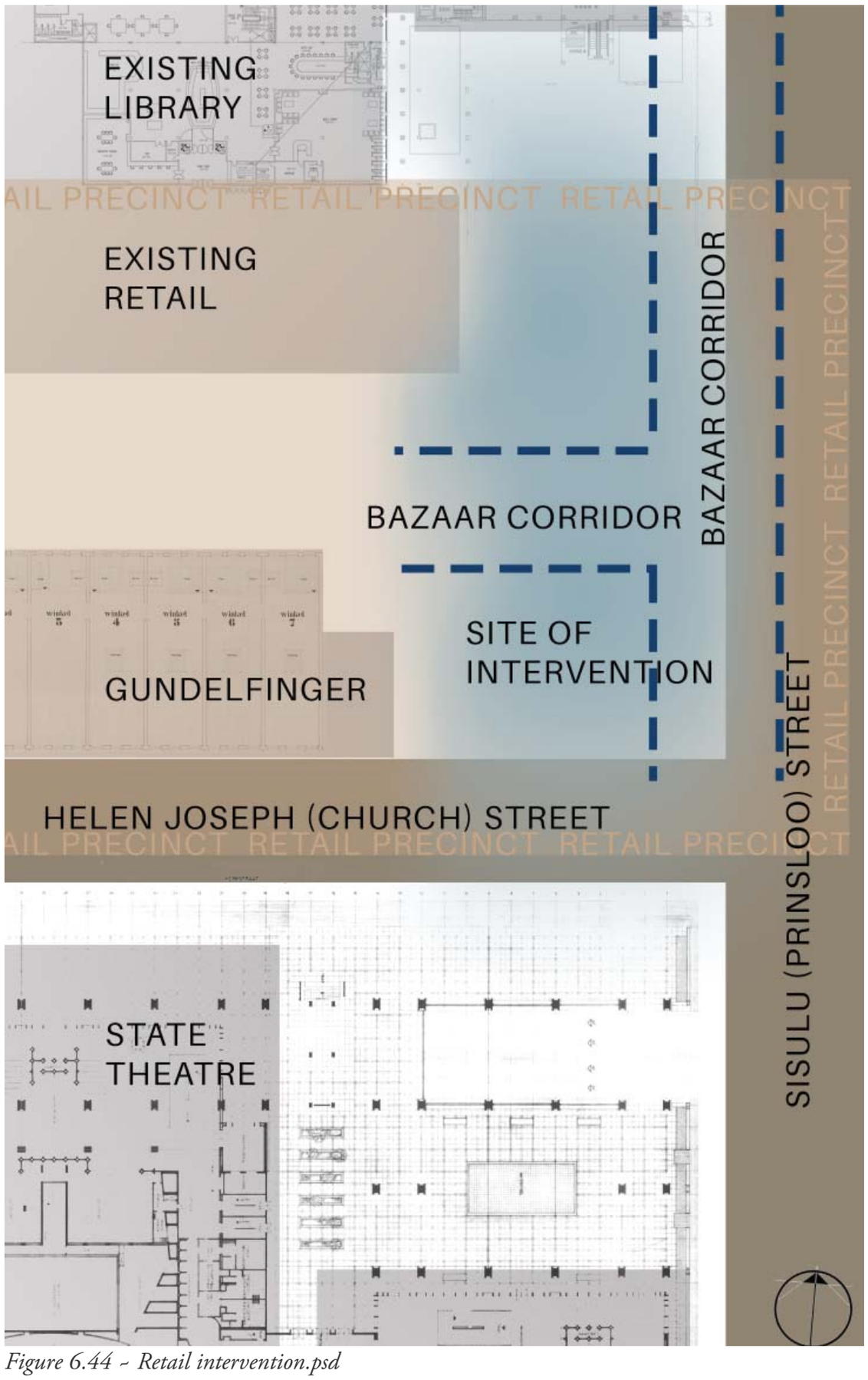


Figure 6.44 ~ Retail intervention.psd

Building response

The buildings specifically responded to were the State Theatre, Gundelfinger, the Sammy Marks Centre, the Reserve Bank and the Urban Forest.

State Theatre

The State Theatre building was responded to in scale and mass. The new intervention bridges the scale between the ground floor square and the heights of the surrounding buildings by creating a structure of a similar height to the State Theatre. The massing of the State Theatre forms part of the Urban Built condition which conceptually roots the design in this specific context.

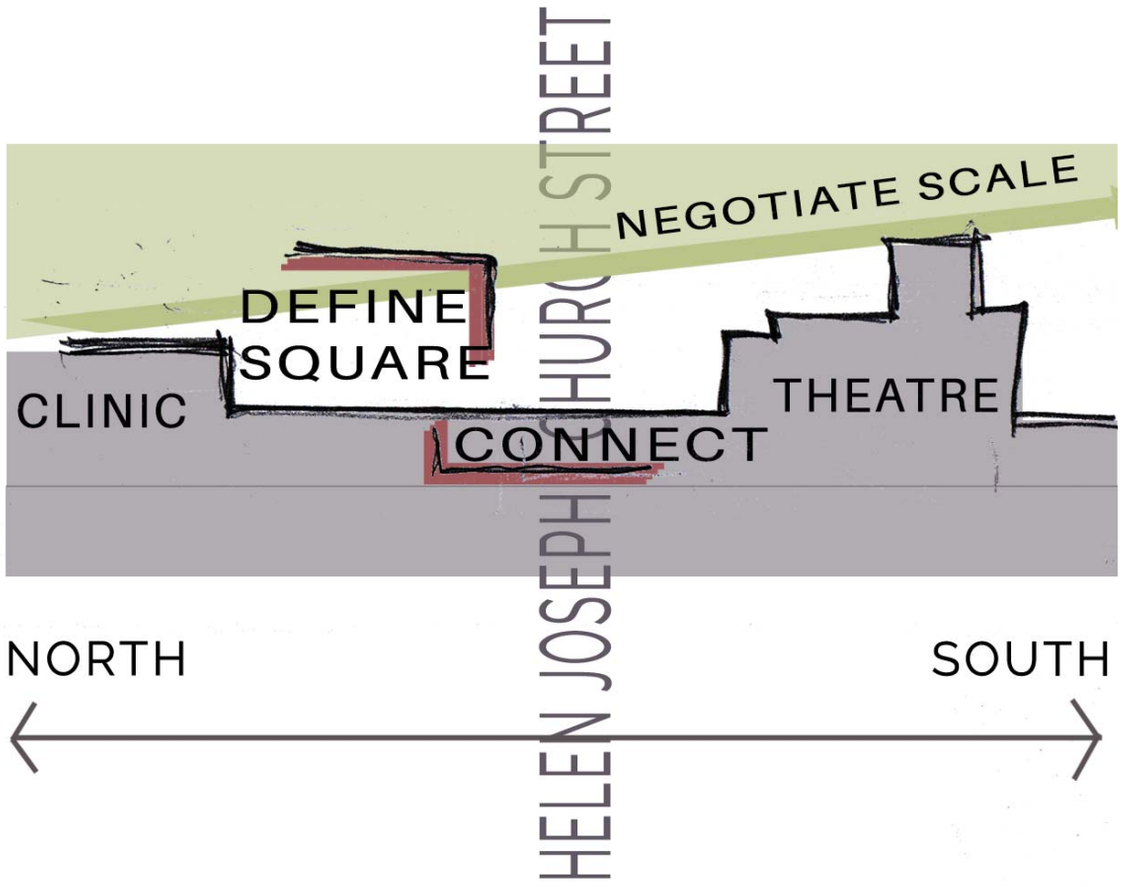


Figure 6.45 ~ Response to State Theatre building.psd

Gundelfinger

The Gundelfinger building is the oldest and most dignified on site. It gives the site its gravity. Conceptually it became the cornerstone or datum point for the design. The rhythm in the facade of the Gundelfinger building was analysed, repeated and extended to create an order on the site. It ordered the grid on site and it informed the proportions of the design.

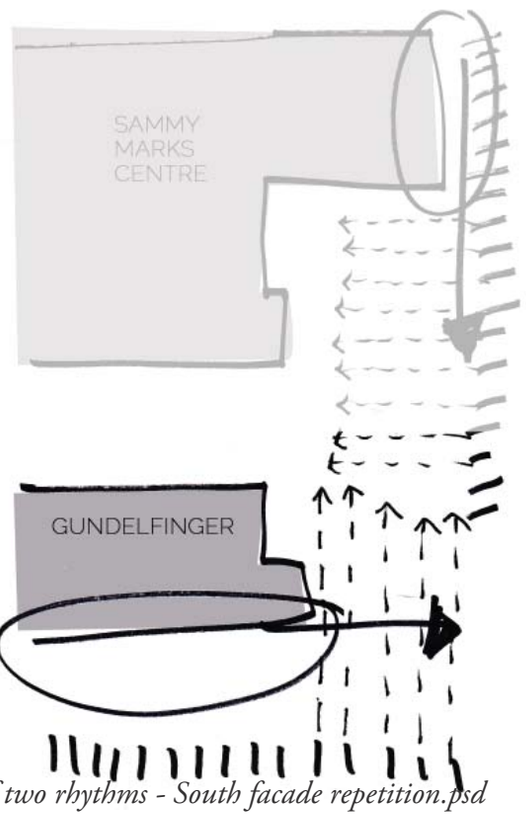


Figure 6.46 ~ Meeting of two rhythms - South facade repetition.psd

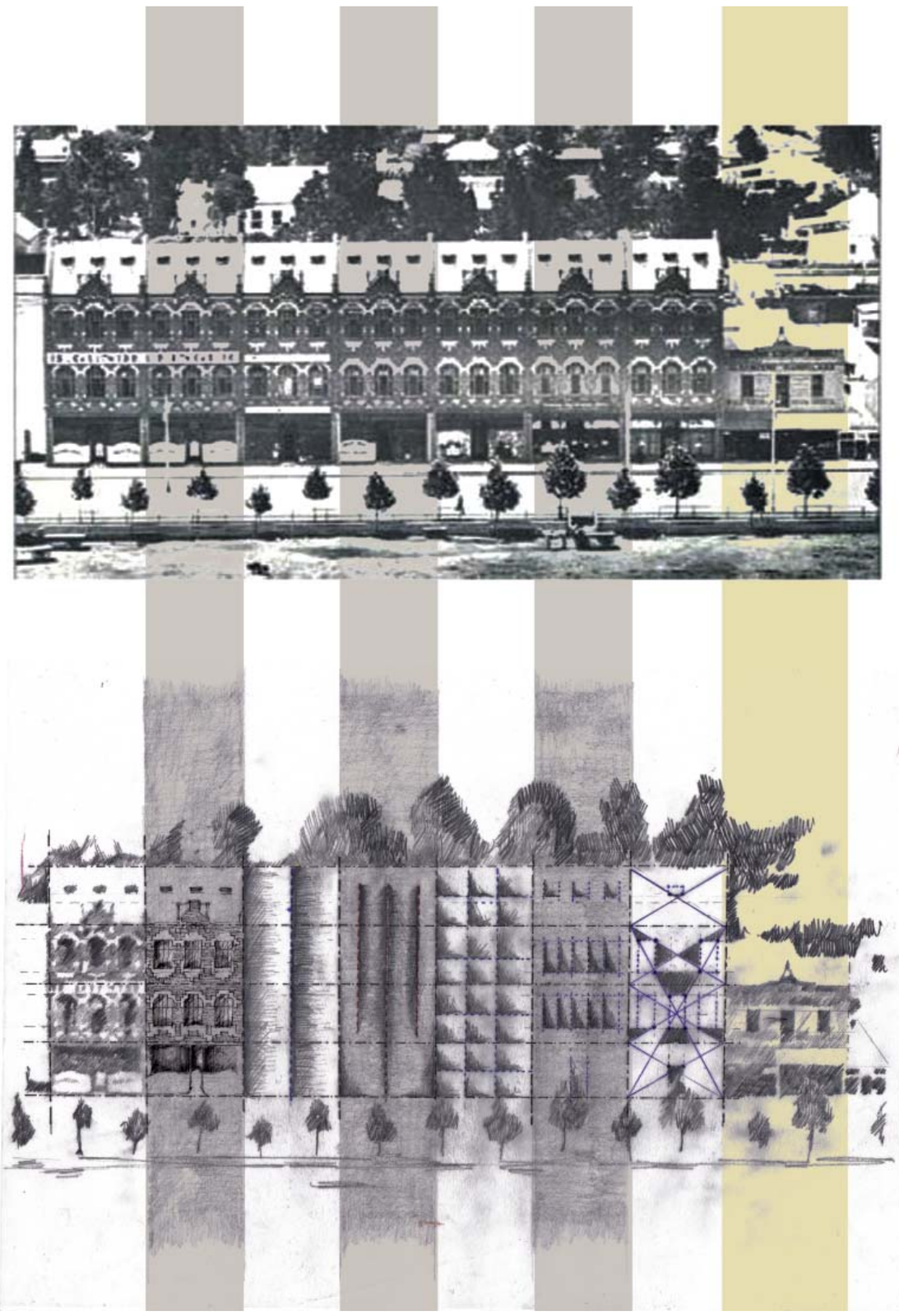


Figure 6.47 ~ Graphic analysis of Gundelfinger facade.psd

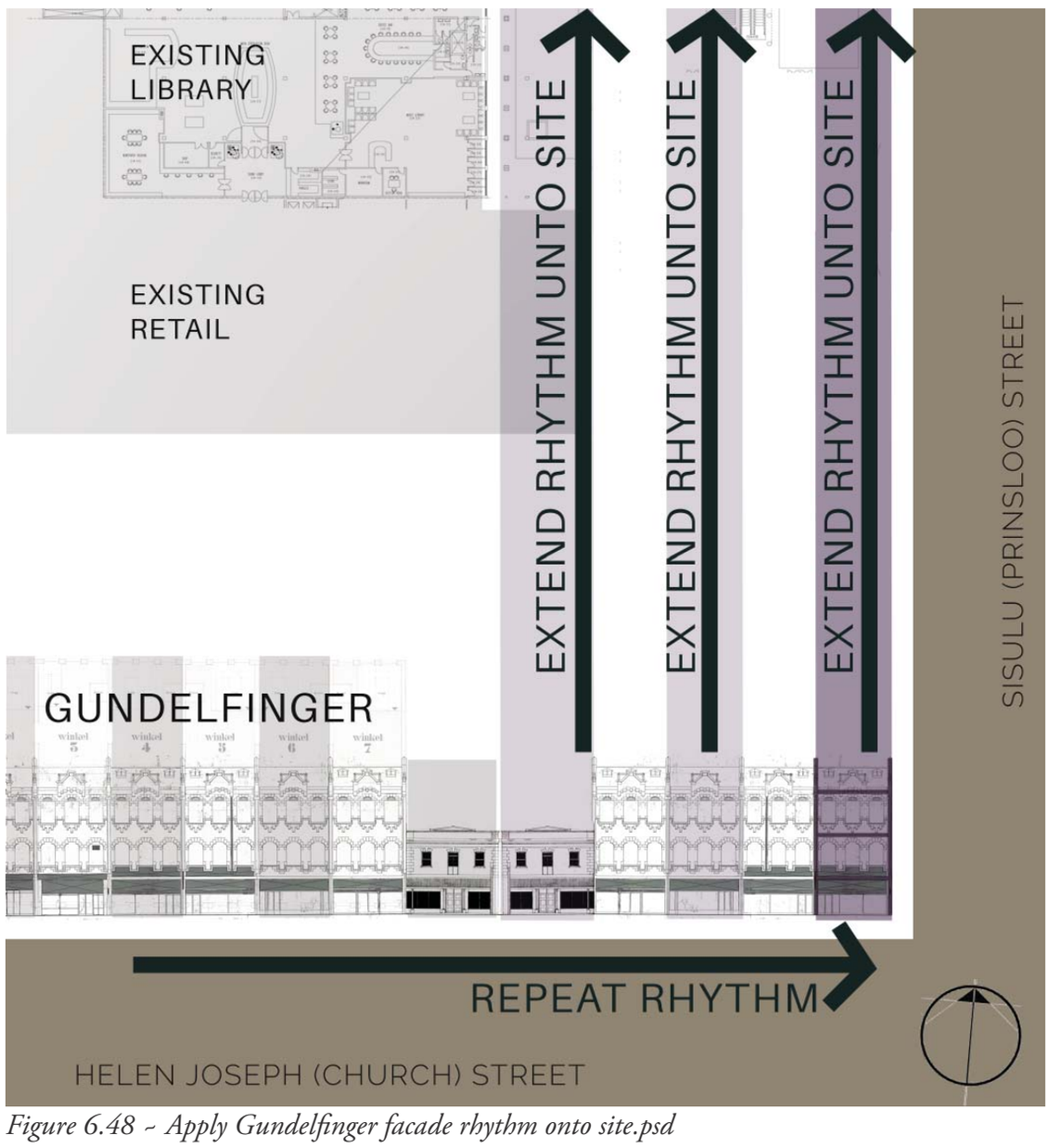


Figure 6.48 ~ Apply Gundelfinger facade rhythm onto site.psd

Sammy Marks

The Gundelfinger building roots the site to its contexts by determining the grid and proportions of the design. The same happens with the Sammy Marks building. The new intervention connects to and augments the clinic programme. The new structure connecting to it adheres to its rhythm and grid. This rhythm is repeated and extended.

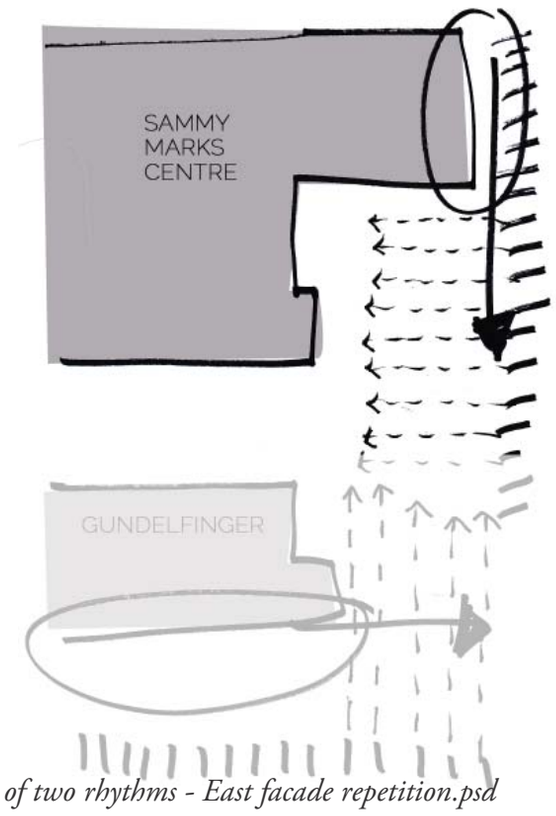


Figure 6.49 ~ Meeting of two rhythms - East facade repetition.psd

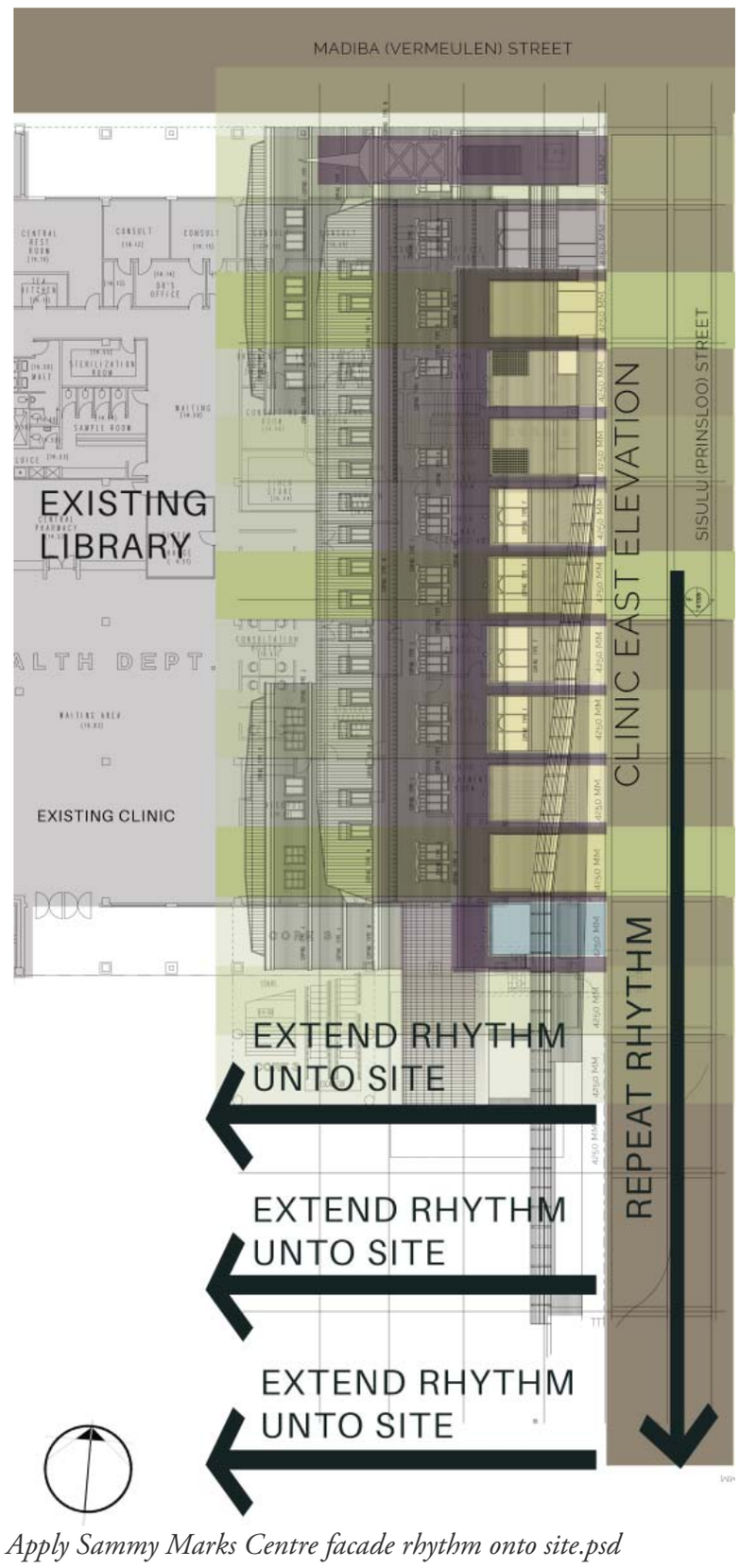


Figure 6.50 ~ Apply Sammy Marks Centre facade rhythm onto site.psd

Reserve Bank

The design response to the Reserve Bank is limited to its influence on scale. The new intervention brings the scale up to the level of the historic Church Street city scale.

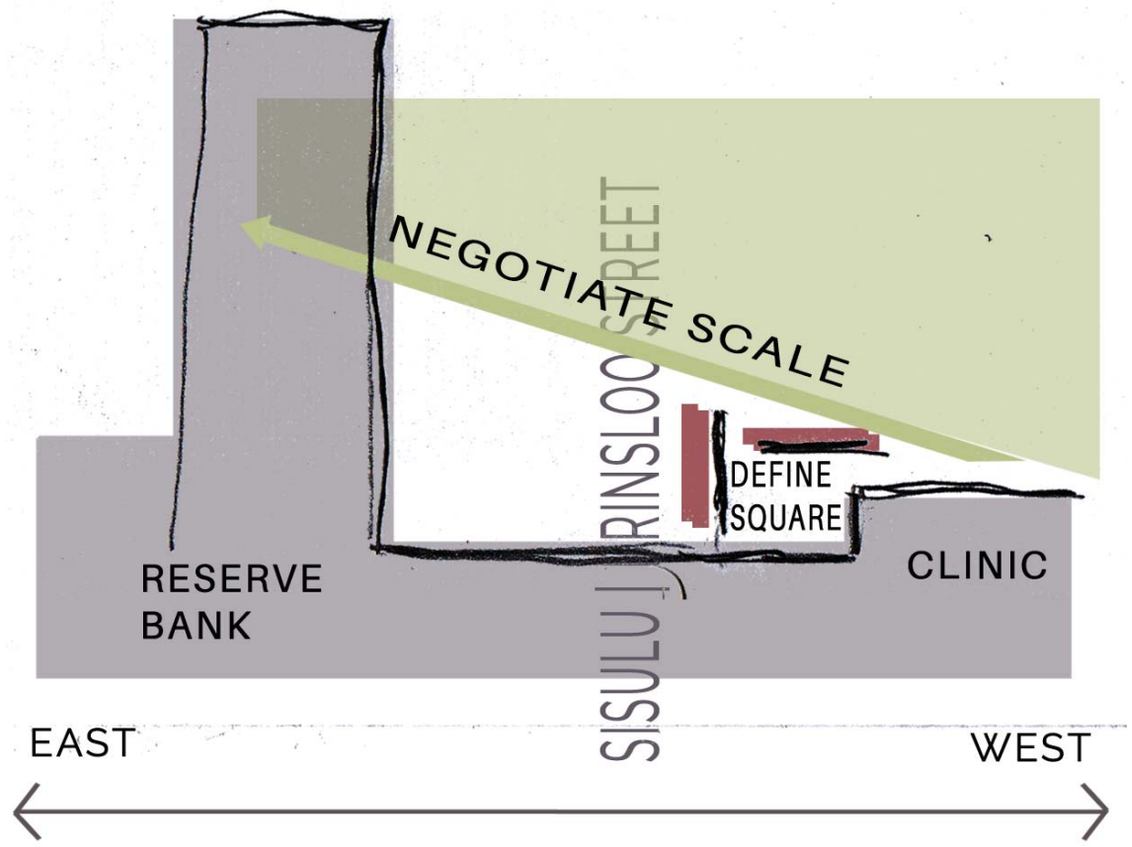


Figure 6.52 ~ Response to Reserve Bank building.psd

Urban Forest

As explained previously the Urban Forest becomes the antithesis of the Urban Built condition. The design response towards it is that the edge, created to define the square, becomes the mediator between the Urban Built condition and the Urban Forest.

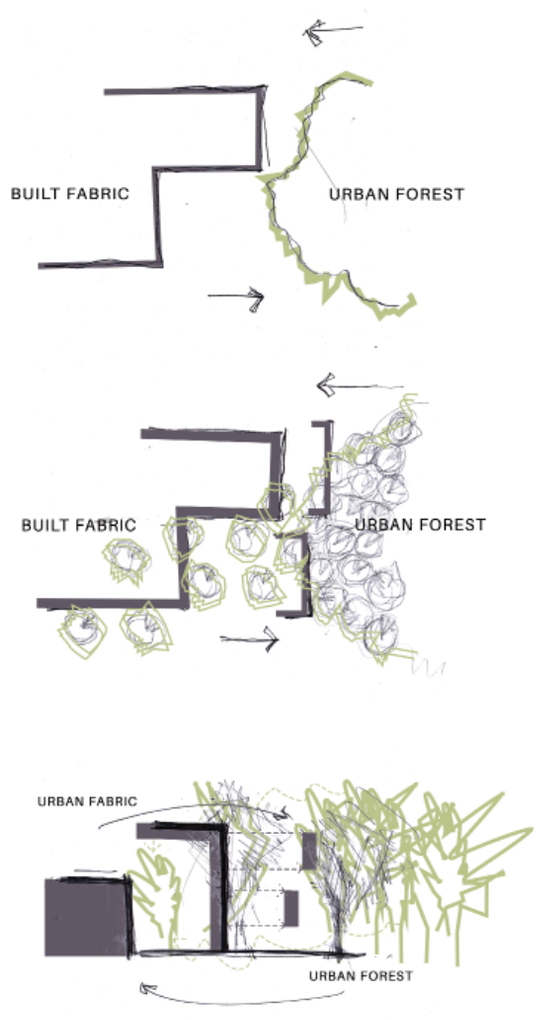


Figure 6.51 ~ Concept diagram - Urban Built versus Urban Forest.psd

Material responses

Stone, concrete, brick, steel and glass are the material conditions discussed earlier. The specific design response to them will be discussed below.

Figure 6.53 ~ Slate floor surfaces.psd ("LANTIC COLONIAL by Porcelanosa" 2015)

Stone

Sandstone, granite and shale are the only quarried materials in their natural form currently on site. Only shale will be specifically responded to. In order to strengthen the memory of the water furrows (built with shale) the shale will be used in the showers and the wet steam rooms of the public ablutions.

Concrete

The State Theatre's béton brut are referenced in the new amphitheatre. It is a structure completely built with in situ cast concrete.

Figure 6.54 ~ Concrete amphitheatre.psd (Sanjuan n.d.)

Brick

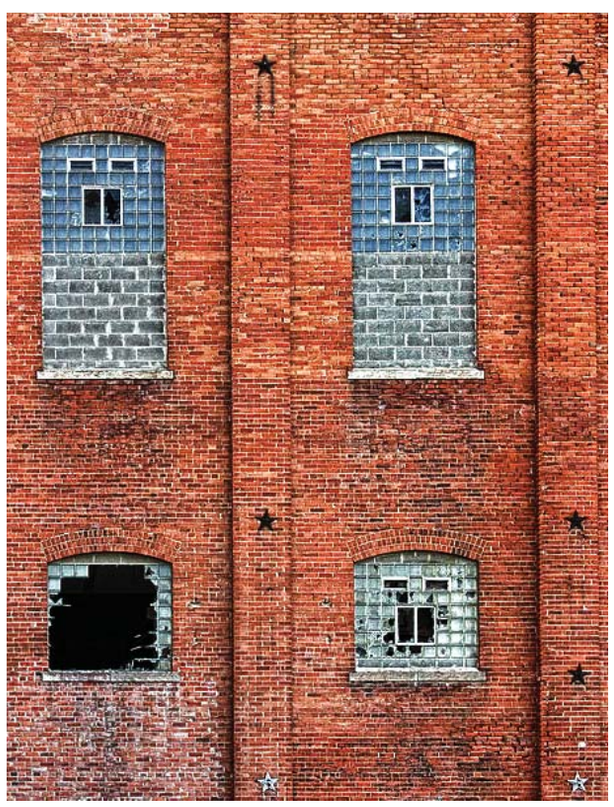


Figure 6.55 ~ Brick wall.psd (James Bo Insogna n.d.)

The Gundelfinger building is the conceptual anchor to the Urban Built condition and its red clay bricks are very significant. It is therefore the material on site with the greatest gravity. Brick is therefore the material that will communicate the Urban Built condition in the design. The brick wall becomes the wall that supports the colonnade or stoep. Moreover, reminiscent of the Roman aqueduct it becomes the structure that supports and serves the public ablutions.

Steel

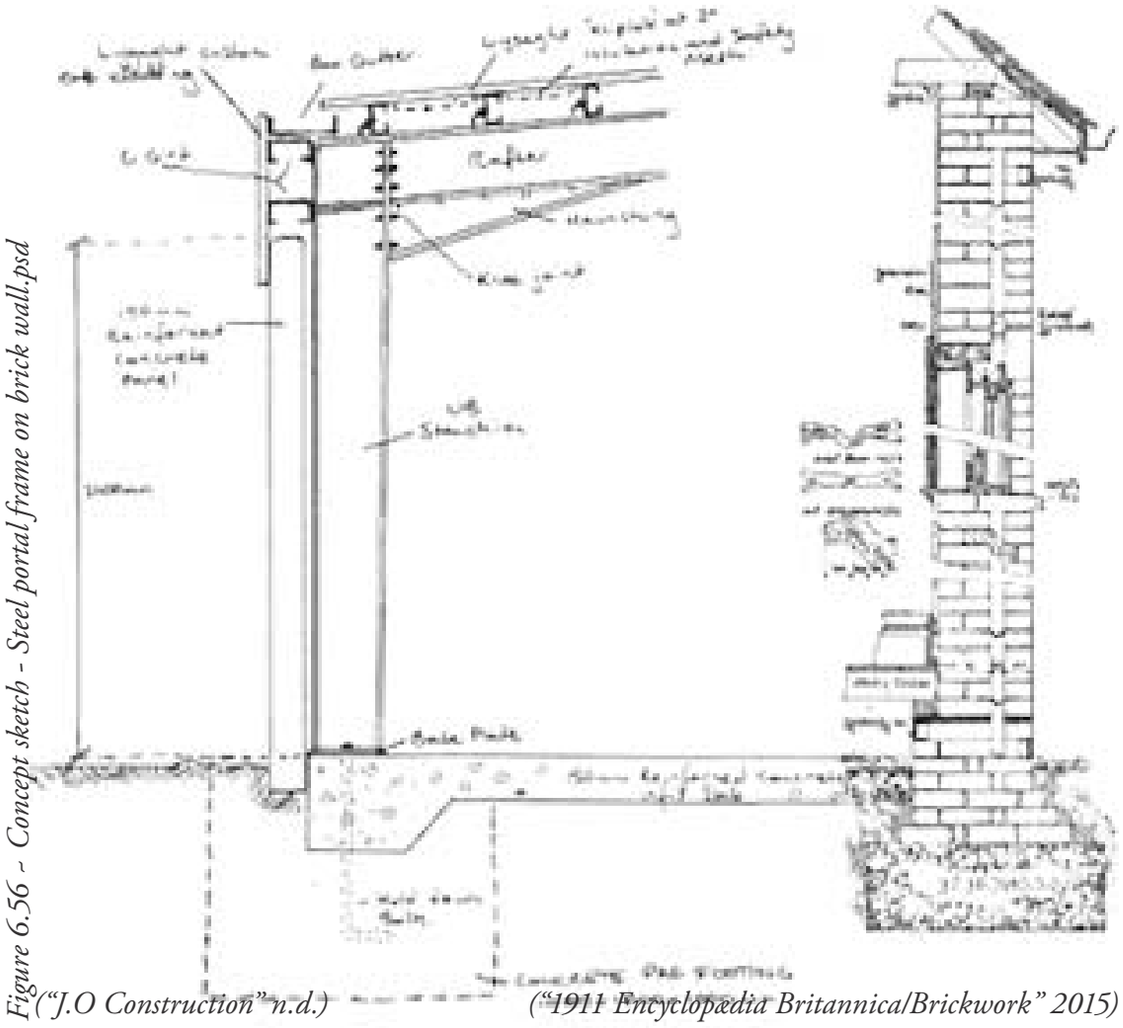


Figure 6.56 ~ Concept sketch - Steel portal frame on brick wall.psd ("J.O Construction" n.d.) ("1911 Encyclopædia Britannica/Brickwork" 2015)

The steel arches on site are incorporated into the new design. As with wood, steel can be joined and assembled. It is therefore the more appropriate material to use as structural system for the translation of the Urban Forest condition.

Glass

The black glass used on the South African Reserve Bank will be used for glazing on the east and west façades of the design where vertical louvres will block direct sun. The black glass will still be visible from the south (louvres angled at 112° according to Pretoria's azimuth on summer solstice).

Figure 6.57 ~ Black glass.psd ("The World's most recently posted photos of steilneset" n.d.)

Circulation Responses

Specific design responses to the arcades, the streets and the basements

Arcades

Pretoria's arcades are a vital part of the city's character. It provides a network of shortcuts that breaks the long east-west façades of the city block. These arcades create the opportunity for an intimate human scaled space. The arcades were also implemented in the 1994 design of the Sammy Marks Centre. The strengthening thereof was one of the conclusions of the urban vision. The design aims to not only investigate the effect of the arcade on the ground but hopes to evolve it into arcades that connect the higher levels of the city as well.

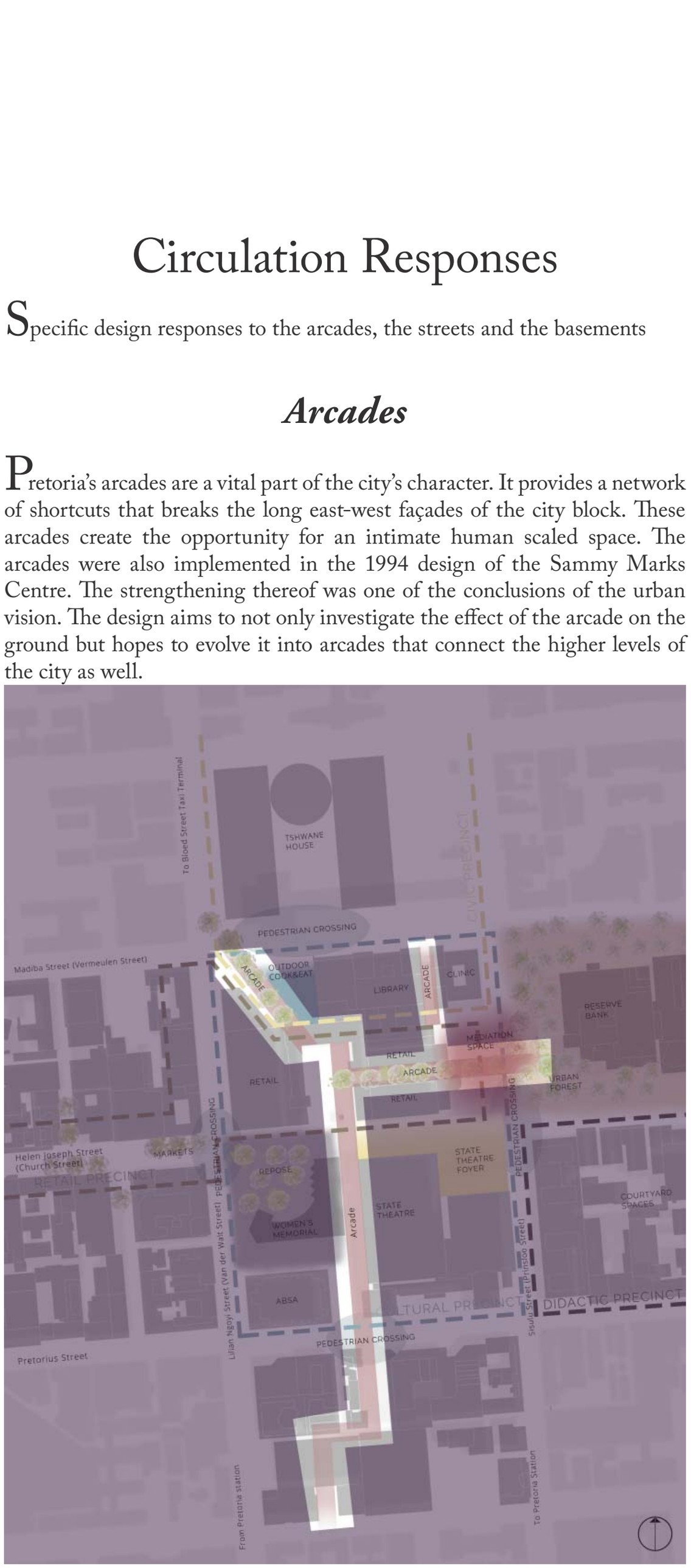


Figure 6.58 ~ Arcades on site.psd

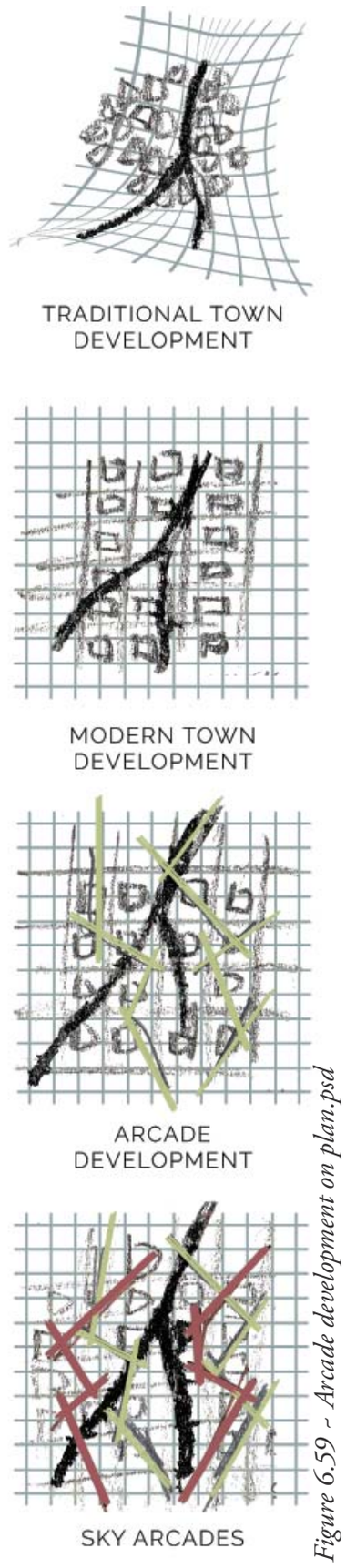


Figure 6.59 ~ Arcade development on plan.psd

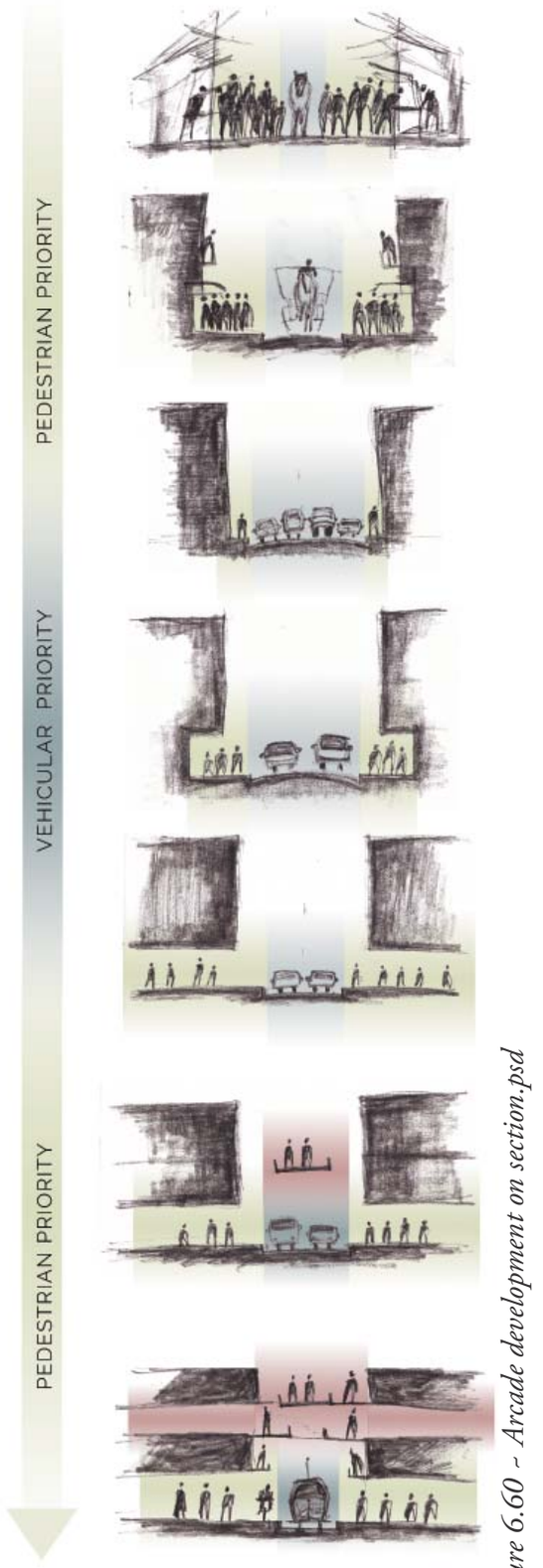


Figure 6.60 ~ Arcade development on section.psd

Streets

In the urban vision it was decided that specially designed pedestrian crossings with appropriate surface material and traffic control systems were the only way to prioritise the pedestrian in this busy part of the city. In this design a further measure is taken to communicate the ranking of the pedestrian in the hierarchy. It is done by changing the street surface from Madiba (Vermeulen) Street all the way to Pretorius Street and by inserting an island of trees that will not only provide additional green spaces, but also supports the concept of the Urban Forest spilling out into the rest of the city.

Basements

The basement parking under the Sammy Marks centre is badly lit and circulation for pedestrians is obscured. The decision to sink the courtyard and amphitheatre to lower levels was mainly done to keep the ground level clear on the eye level of the pedestrian. However flooding the basement with light makes it more accessible and visible.

Environmental responses

The main responses to the solar conditions include solar shading. The structure's orientation creates very large eastern and western façades and vertical louvres with angles of 112°E on the eastern façade and 112°W on the western façade are crucial.

Further desing development

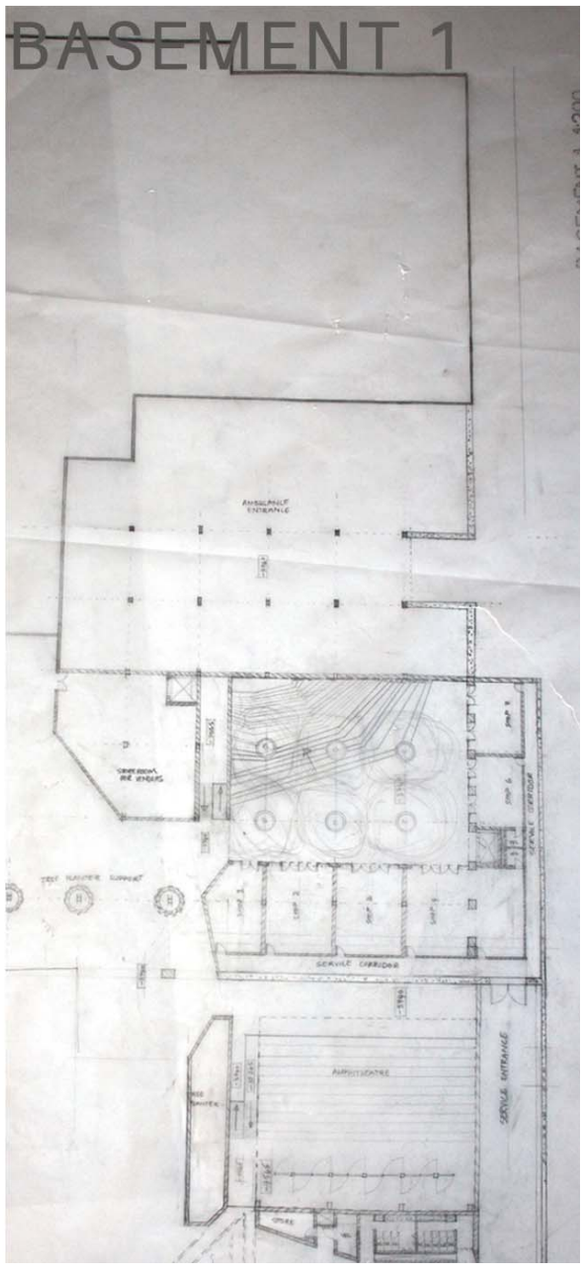


Figure 6.61 ~ Design deveplopment - Basement 1 floor plan.psd

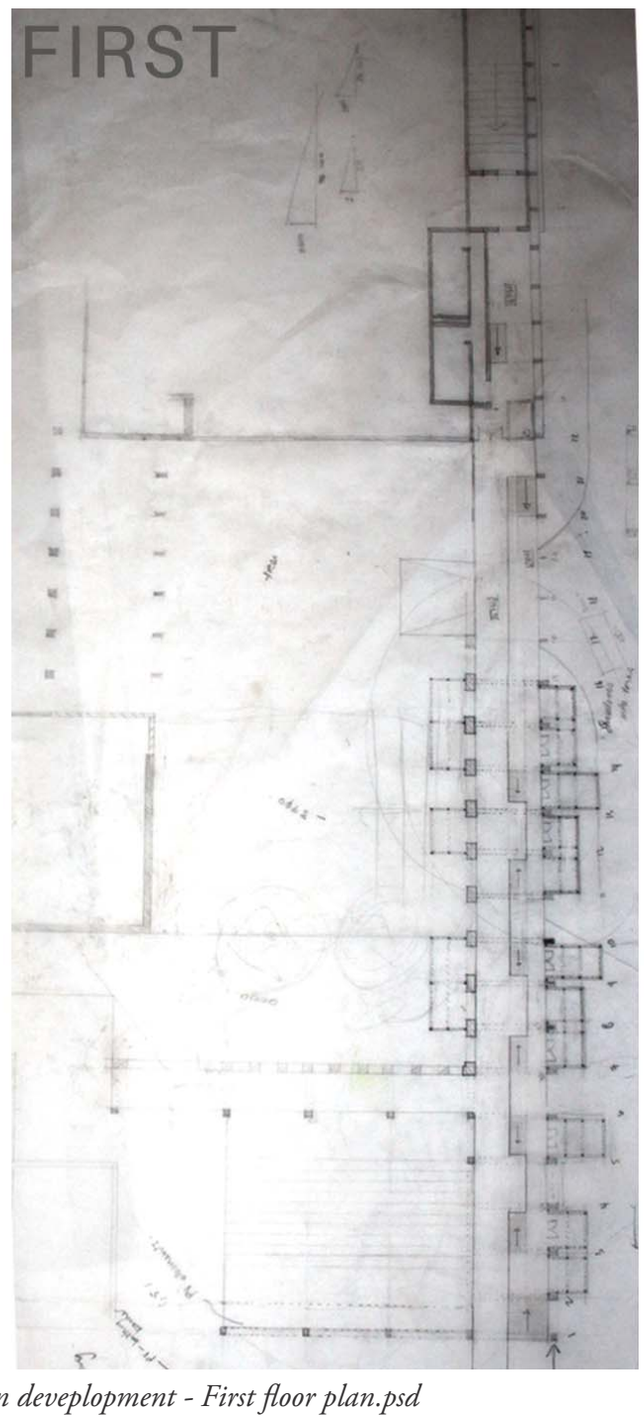


Figure 6.62 ~ Design deveplopment - First floor plan.psd

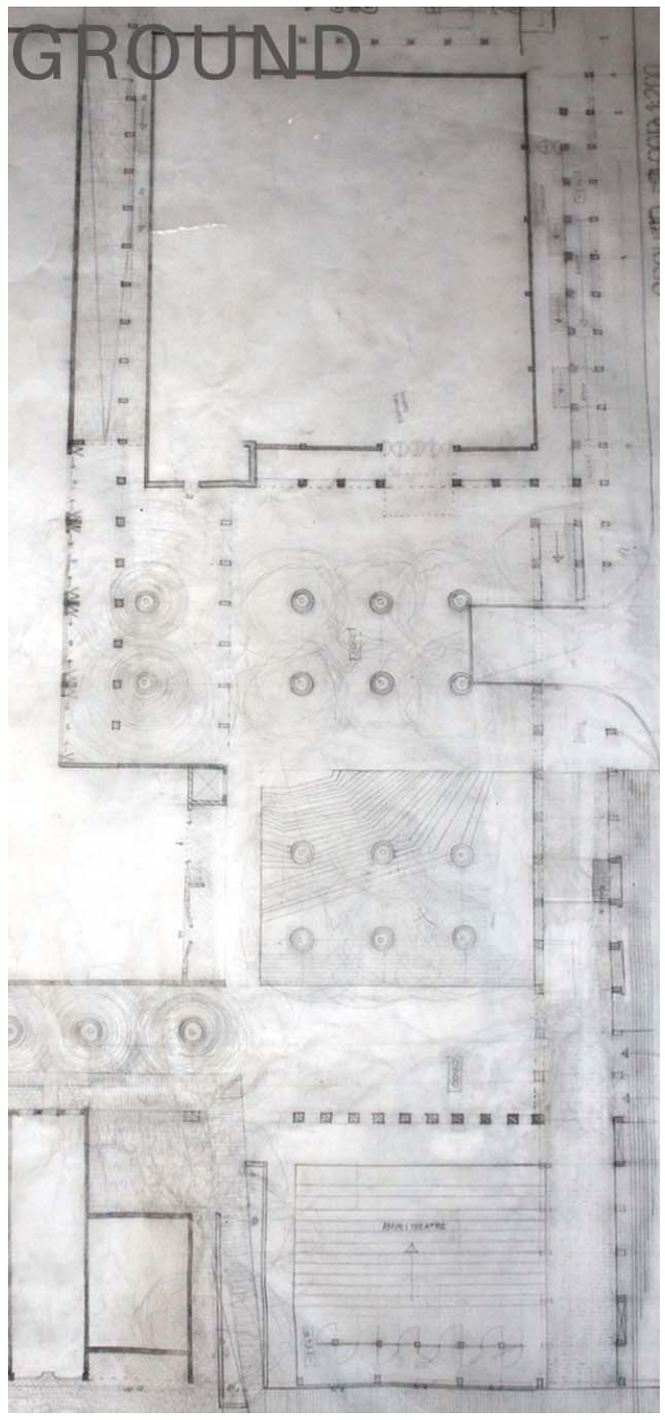


Figure 6.63 ~ Design deveplopment - Ground floor plan.psd

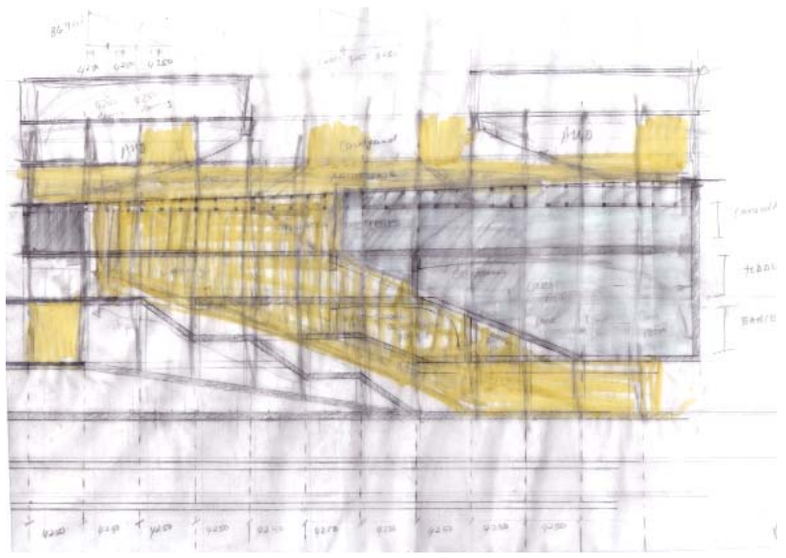


Figure 6.65 ~ Design development - Clinic addition.psd

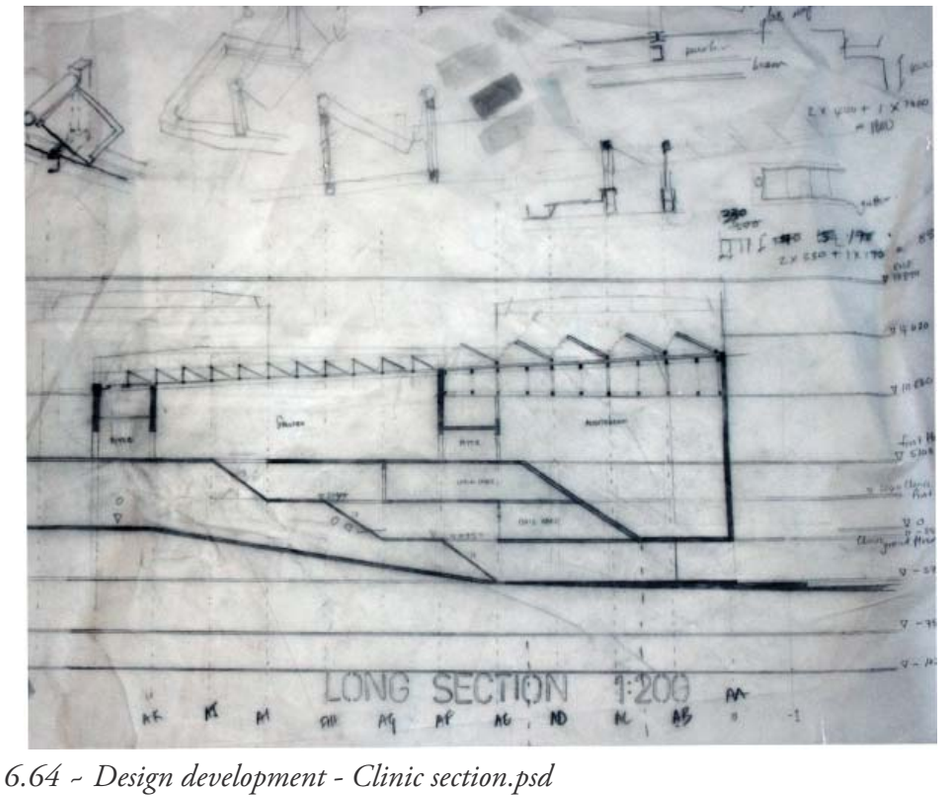


Figure 6.64 ~ Design development - Clinic section.psd

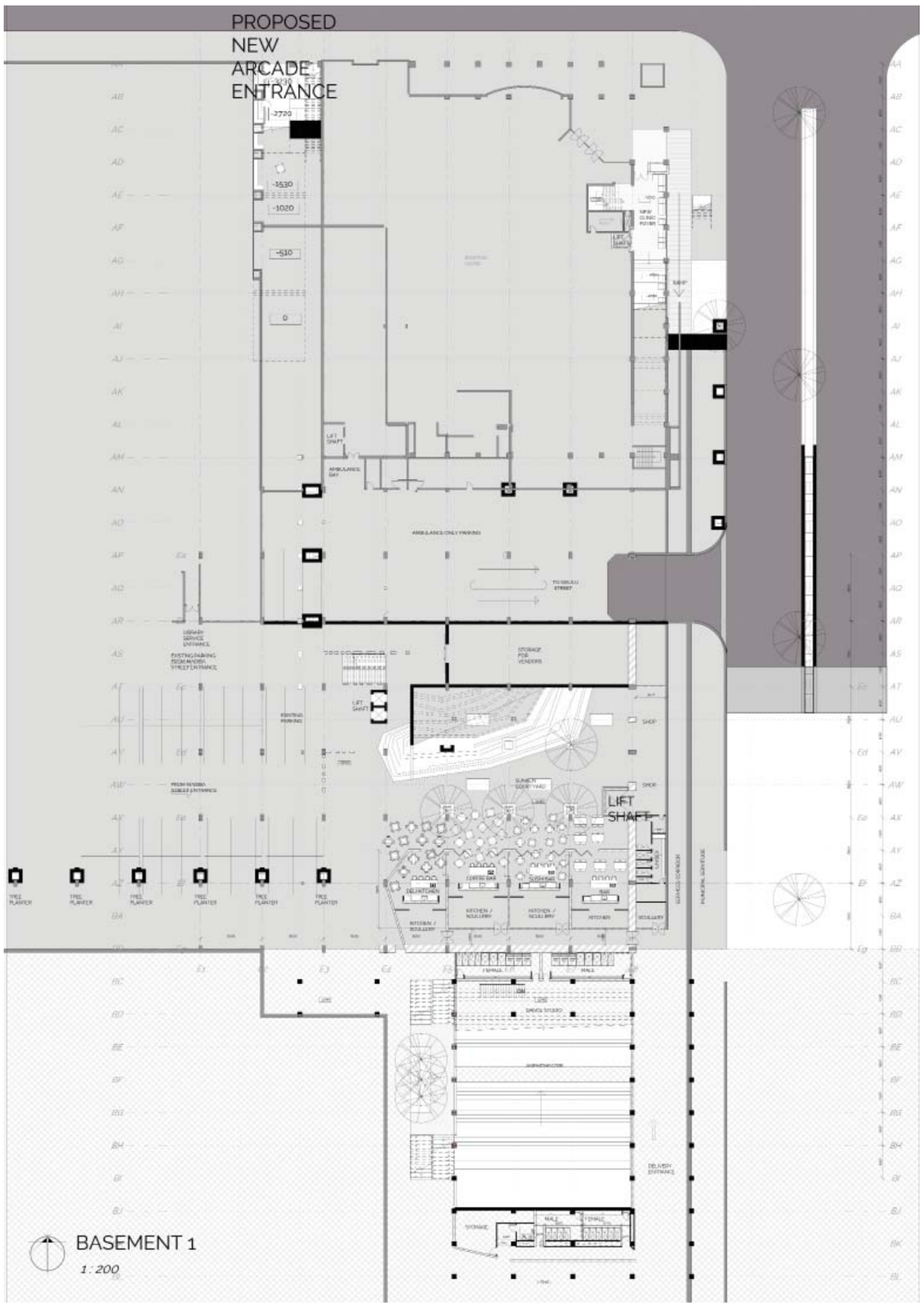


Figure 6.66 ~ Plan development - Basement 1.psd

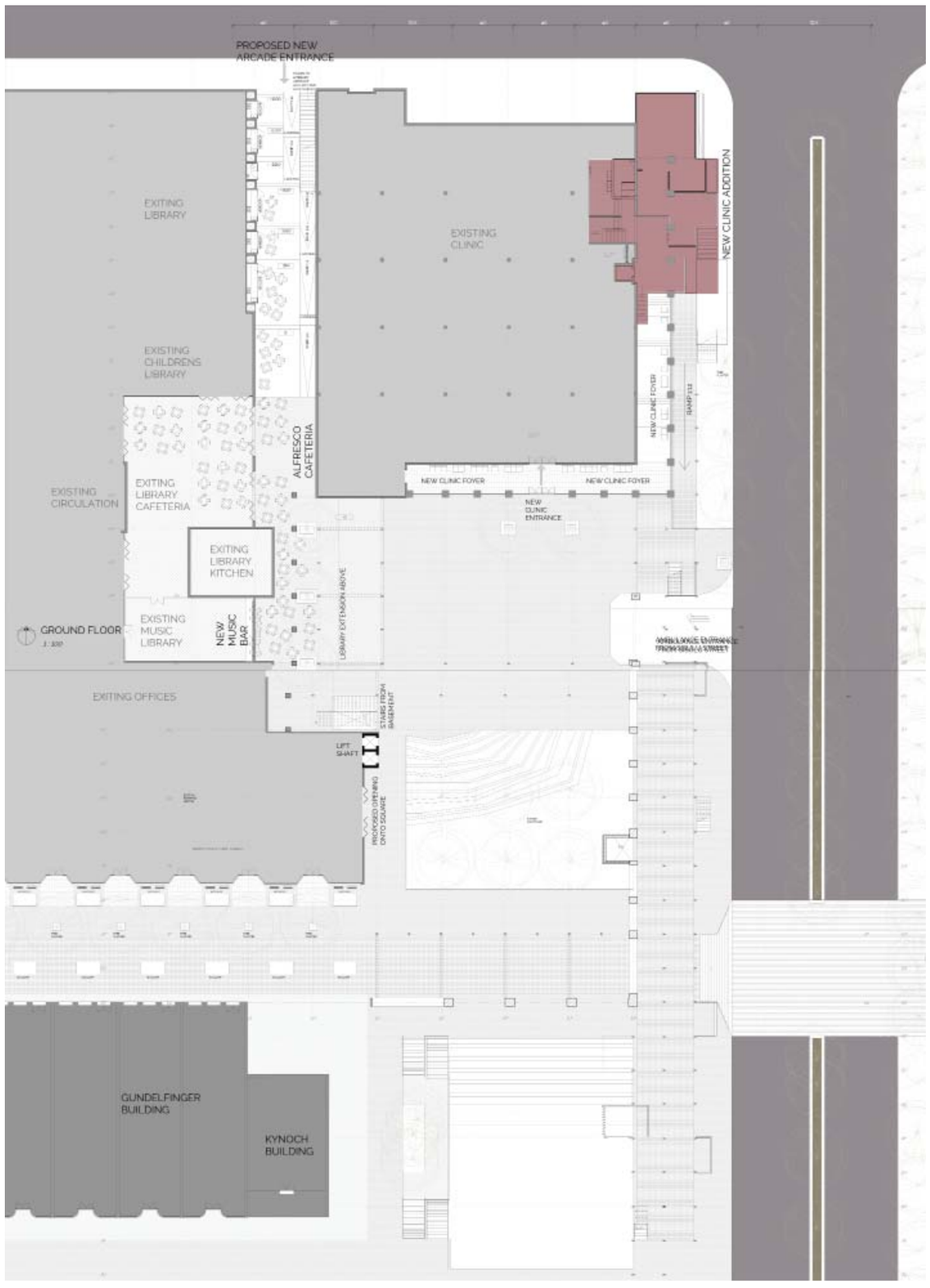


Figure 6.67 ~ Plan development - Ground floor.psd

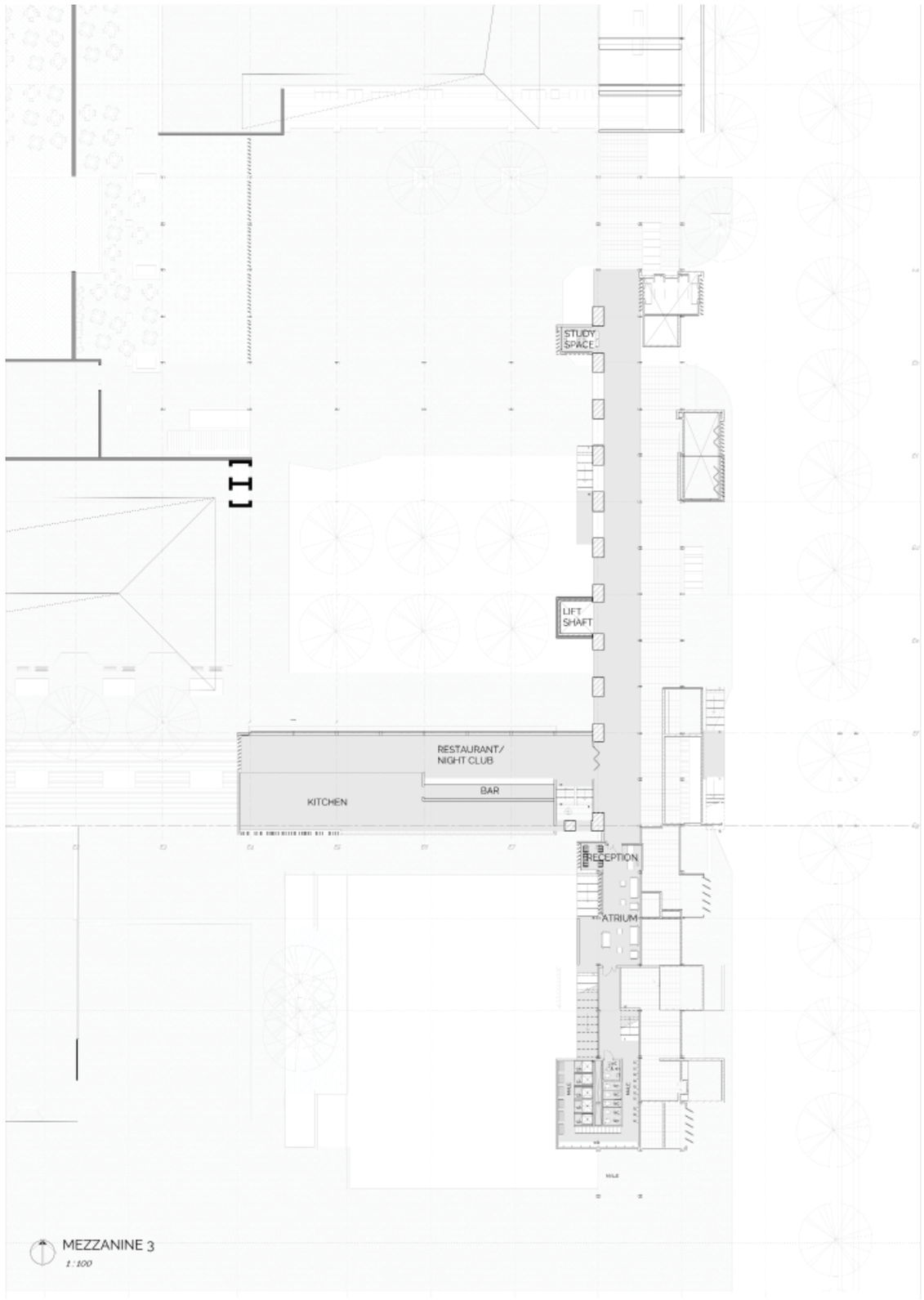


Figure 6.68 ~ Plan development - Mezzanine 3.psd

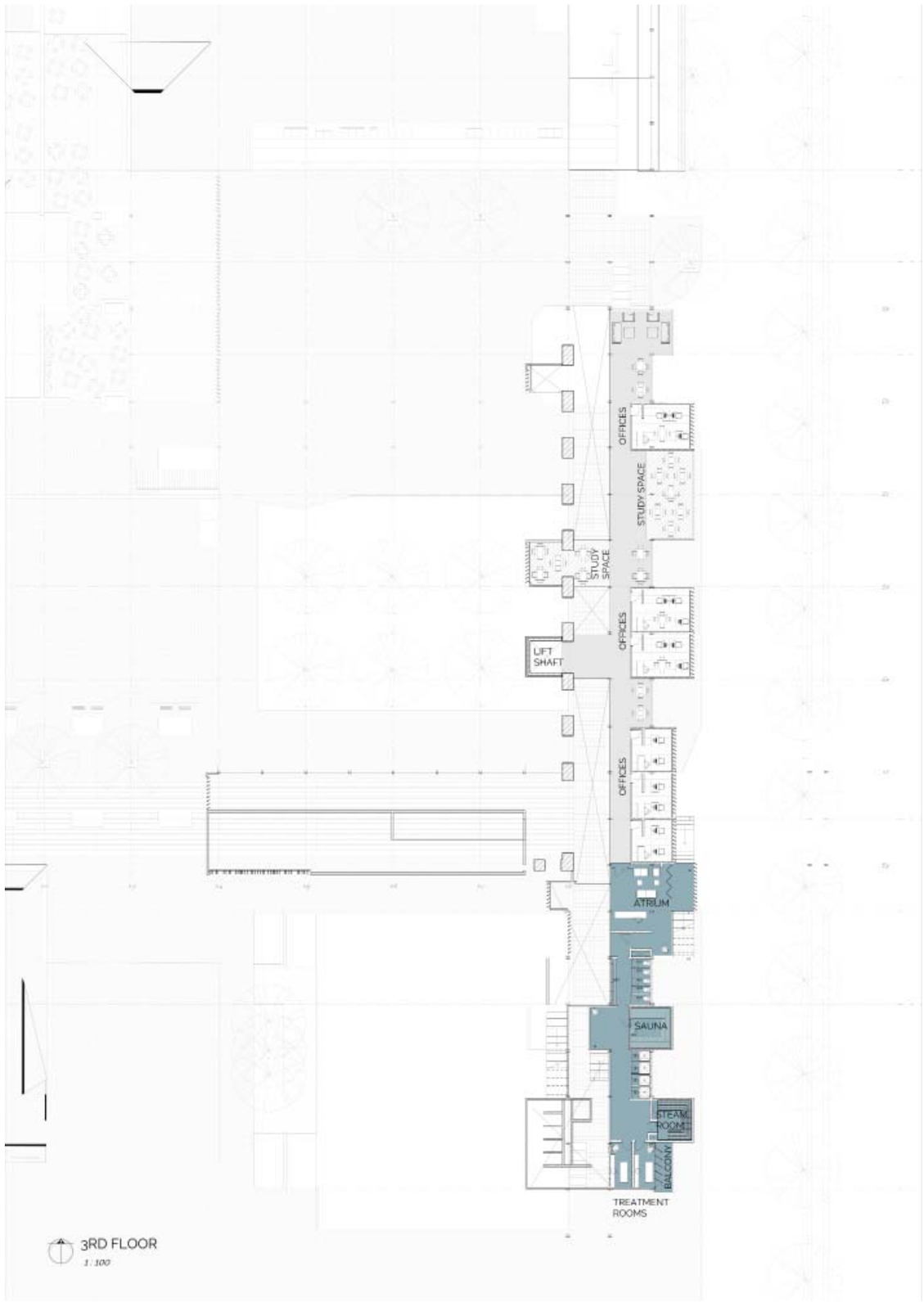


Figure 6.69 ~ Plan development - Third floor plan.psd

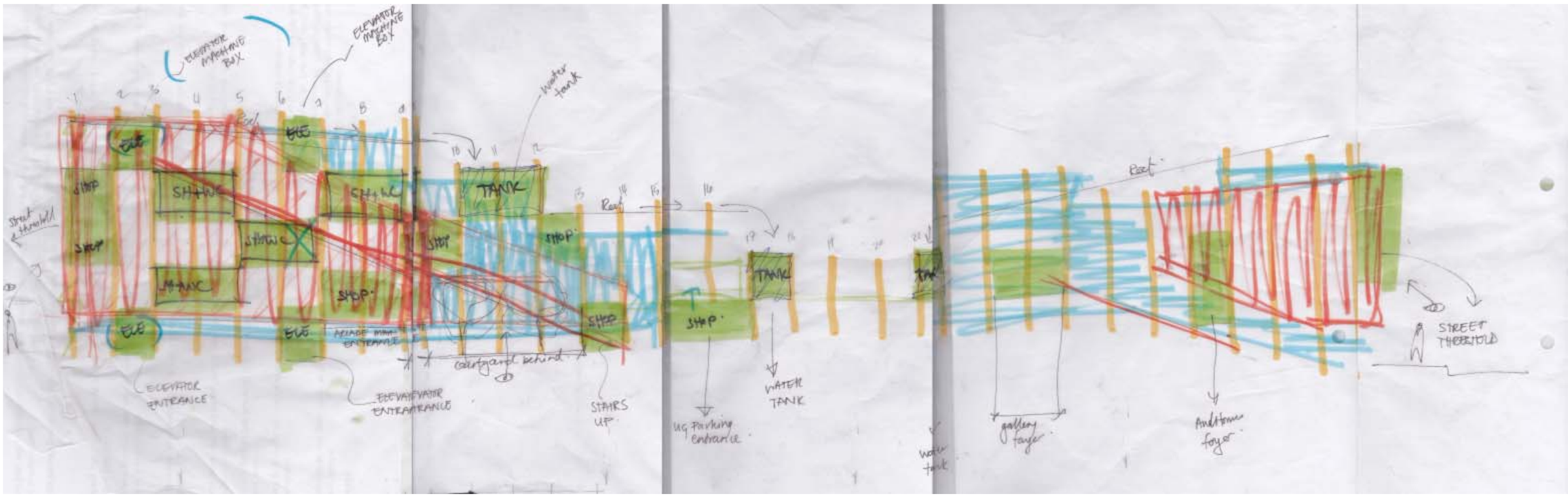


Figure 6.70 ~ Programme development on elevation.psd

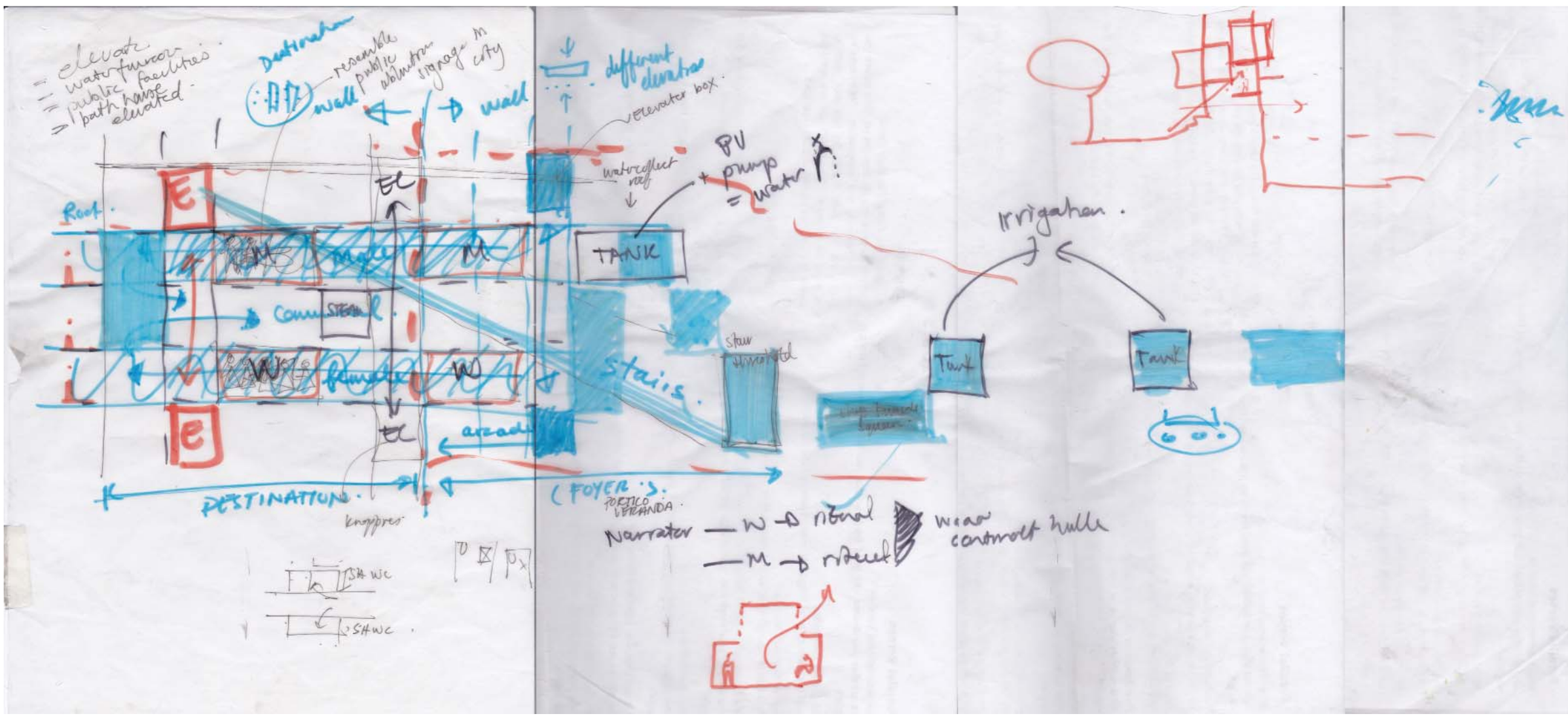
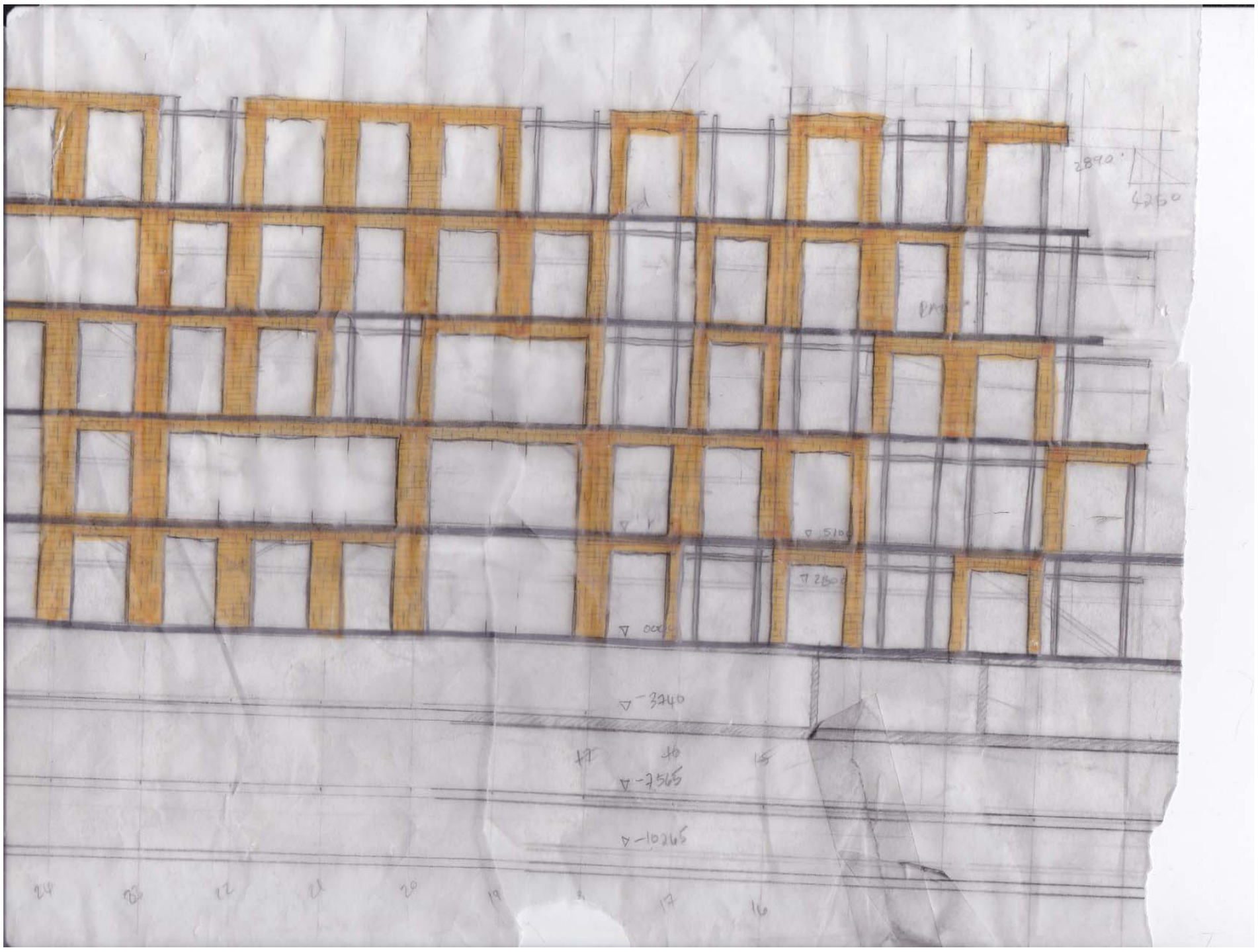
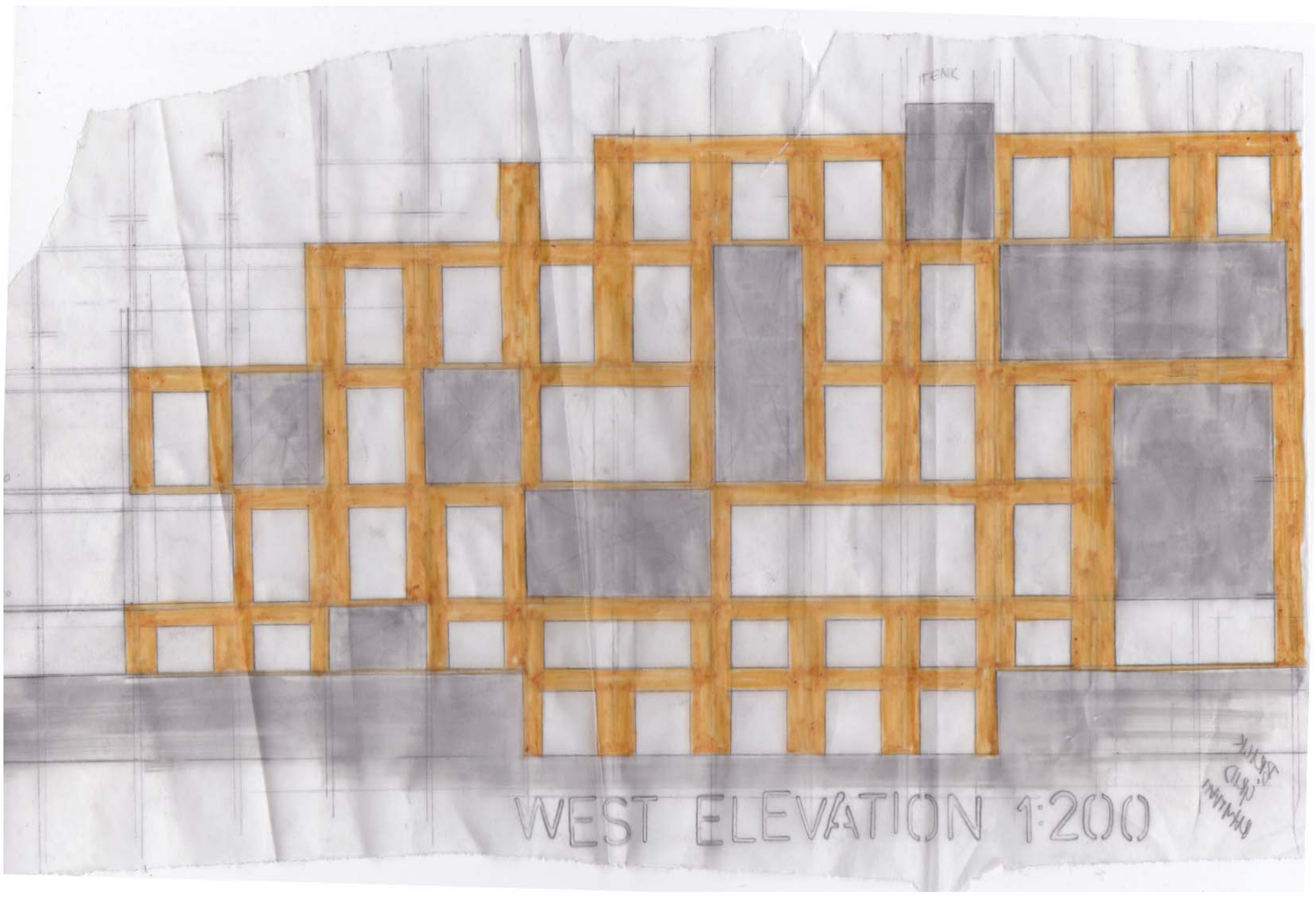


Figure 6.71 ~ Design development - water system on elevation.psd

Elevation design





"When we look at the finished building, our eyes, guided by our analytical mind, tend to stray and look for details to hold on to. But the synthesis of the whole does not become comprehensible through isolated details. Everything refers to everything. ~Peter Zumthor (Zumthor, 2010:26)

CHAPTER 7

TECHNIFICATION

The technification of the design is supported by the technical concept that was already mentioned in the design chapter. It does become more specific however and will be discussed henceforth. It leads to the structural and technological intentions and also informs the systems.

TECHNICAL CONCEPT

The structure becomes the threshold between the permanencies of

solid brick and mortar,
heavy concrete and stone,
robust form and mass of the city fabric.

And the ephemerality of

transparent glass and leaves,
intersecting joints and shoots,
light steel and tree branches.

Structural Intentions

The primary structure consists of a 990mm fenestrated concrete and brick wall that provides gravity to the whole device. The wall becomes the support for the secondary structure; a steel colonnade. The steel colonnade connects to the east of the wall and forms a portal frame that supports the floors. The third level in the structural hierarchy is a combination of light weight steel, perforated cladding material with levels of translucency and a clear glass curtain wall that forms the skin on the eastern façade. The fourth level in the structural hierarchy consists of light weight steel boxes (clad with steel and/or glass and solar protection) that protrudes from the portal frame, pushes through the skin and extends out to punctuate the eastern façade. Similar boxes will spill out of the fenestration of the brick wall on the western side.

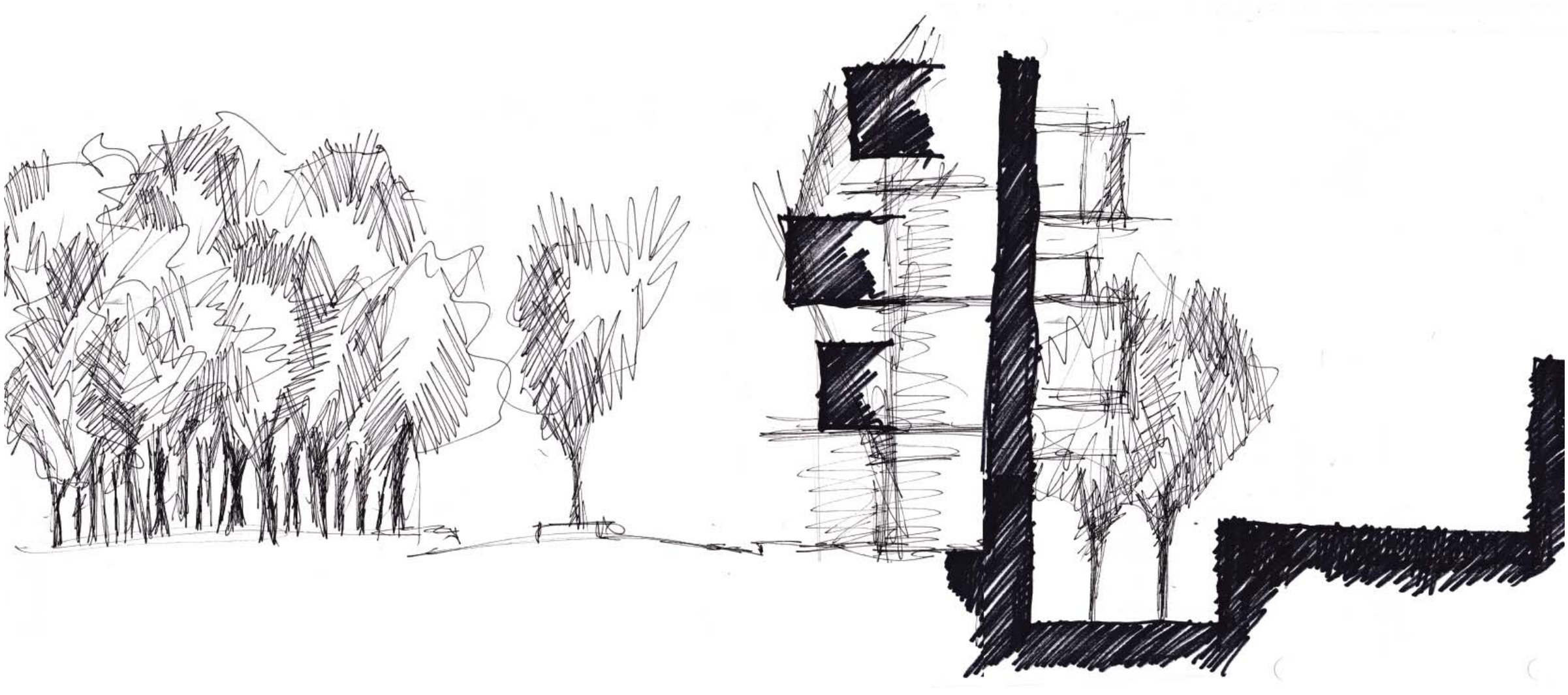
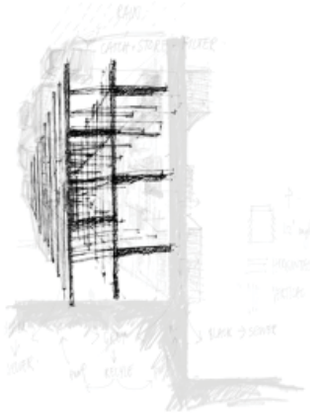


Figure 7.1 ~ Technical concept.psd

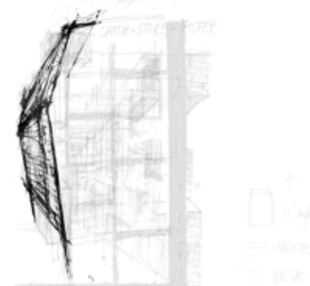
Primary structure:

1255mm fenestrated cotncrete and brick wall that provides gravity to the whole device. The wall becomes the support for the secondary structure.



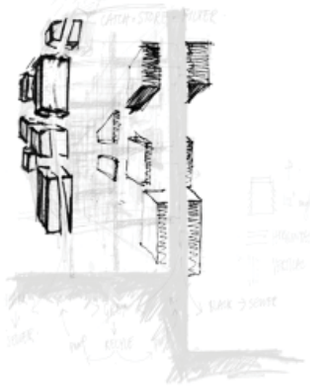
Secondary structure:

A steel colonnade. The steel colonnade connects to the east of the wall and forms a portal frame that supports the floors.



Third level:

Light weight steel, perforated cladding material with levels of translucency and a steel mesh that forms the skin on the eastern façade.

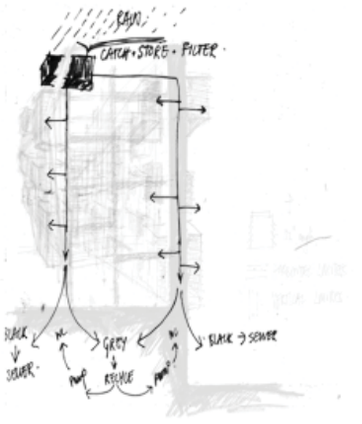


Fourth level:

Light weight steel and timber boxes (clad with steel/ timber and/or glass and solar protection) that protrudes from the portal frame, pushes through the skin and extends out to punctuate the eastern façade. Similar boxes will spill out of the fenestration of the brick wall on the western side.

Environmental system:

Temperature comfort will be tested in the protruding steel boxes housing various programmes. To achieve the comfort zone between 18°C to 22°C for 70% of the time, devices such as solar shading, insulation material and methods to prevent thermal bridging will be used.



Service system:

Rainwater harvesting from the roofs and ground surfaces will be stored for plant irrigation. From storage it will be pumped into the irrigation system. Pumps will be solar powered with photovoltaic panels. Greywater will be harvested and cleaned through a system of filters, microbe additives and oxygen injectors. It will then be stored and pumped for the reuse in the flushing of toilets. The municipal water supply will support the programmes of water for drinking and cleansing.

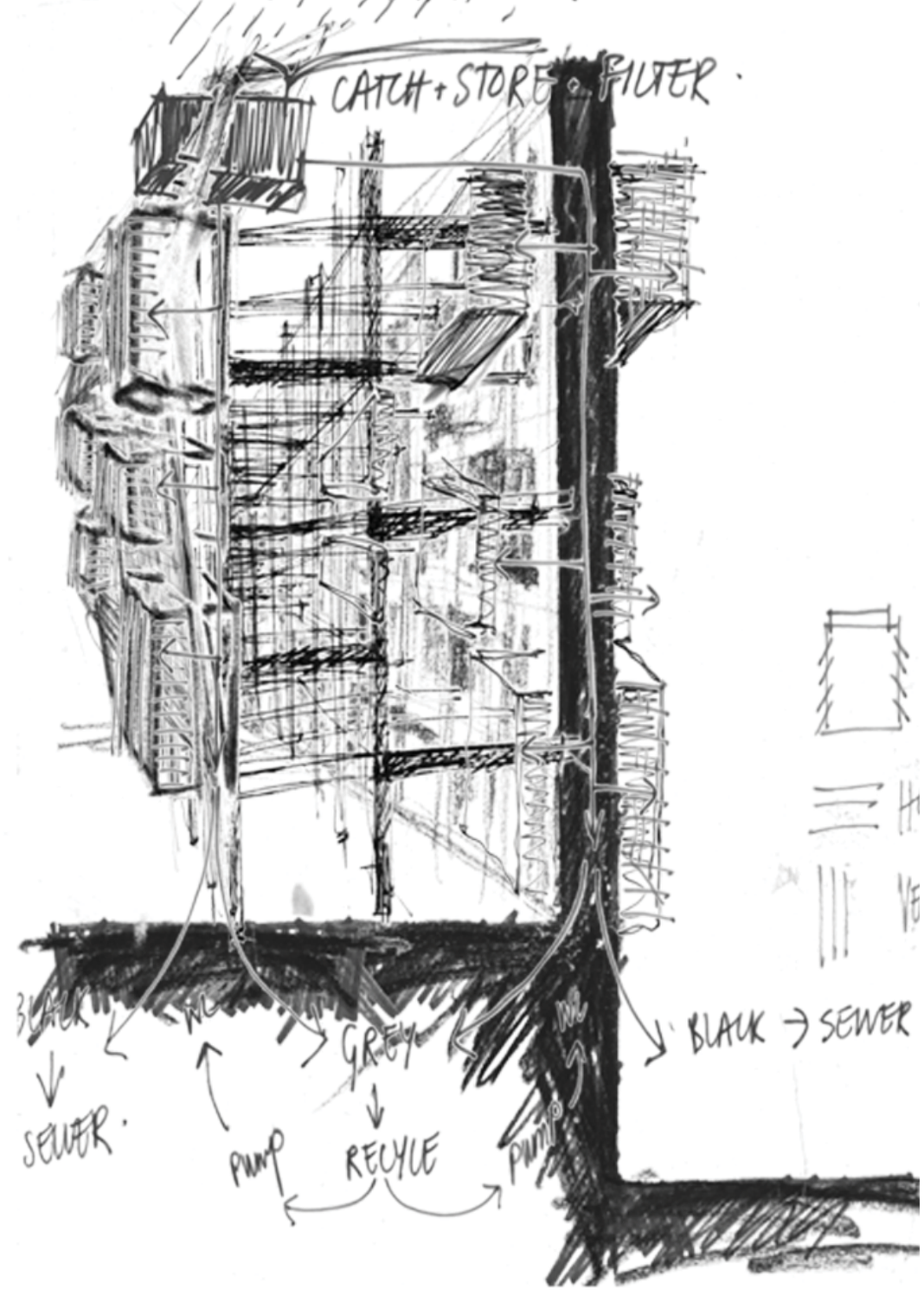


Figure 7.2 ~ Technical systems.psd

Technological Intentions

Everything will be done in situ. Initially the wall was intended to be solid brick work with arched opening. It is however not feasible if labour and material costs are considered. To stay true to the essence of the concept the wall will be in situ cast concrete with brick finish. The openings will therefore not be arches, but horizontal concrete lintels. Concrete, being rooted in the site (the béton brut of the State Theatre) is an appropriate material to use as the primary structure. It is however very harsh and brick is therefore used to bridge the scale to the human scale. Brick has a haptic quality that concrete does not have. The concrete core will be exposed where it functions as the primary structure.

The specifically designed steel columns and beams will be pre-ordered and delivered on site in the correct lengths with the correct assembly fixtures. Joints will primarily be bolted. The assembly will happen on site. The floor shuttering will be assembled with the steel structure. The floors will be concrete in situ on permanent shuttering with cast in reinforcement mesh. The light steel boxes will be assembled and attached to the main steel portal frame on site. The glass curtain wall and cladding will be pre-ordered to specific segmental sizes that fit the grid of the design and can be assemble on site.

Figure 7.3 ~ Material hierarchy.psd

Service System

Water supply and distribution will be the service system focussed on. Rainwater harvesting from the roofs and ground surfaces will be stored for plant irrigation. From storage it will be pumped into the irrigation system. Pumps will be solar powered with photovoltaic panels. Greywater will be harvested and cleaned through a system of filters, microbe additives and oxygen injectors. It will then be stored and pumped for the reuse in the flushing of toilets. The municipal water supply will support the programmes of water for drinking and cleansing.

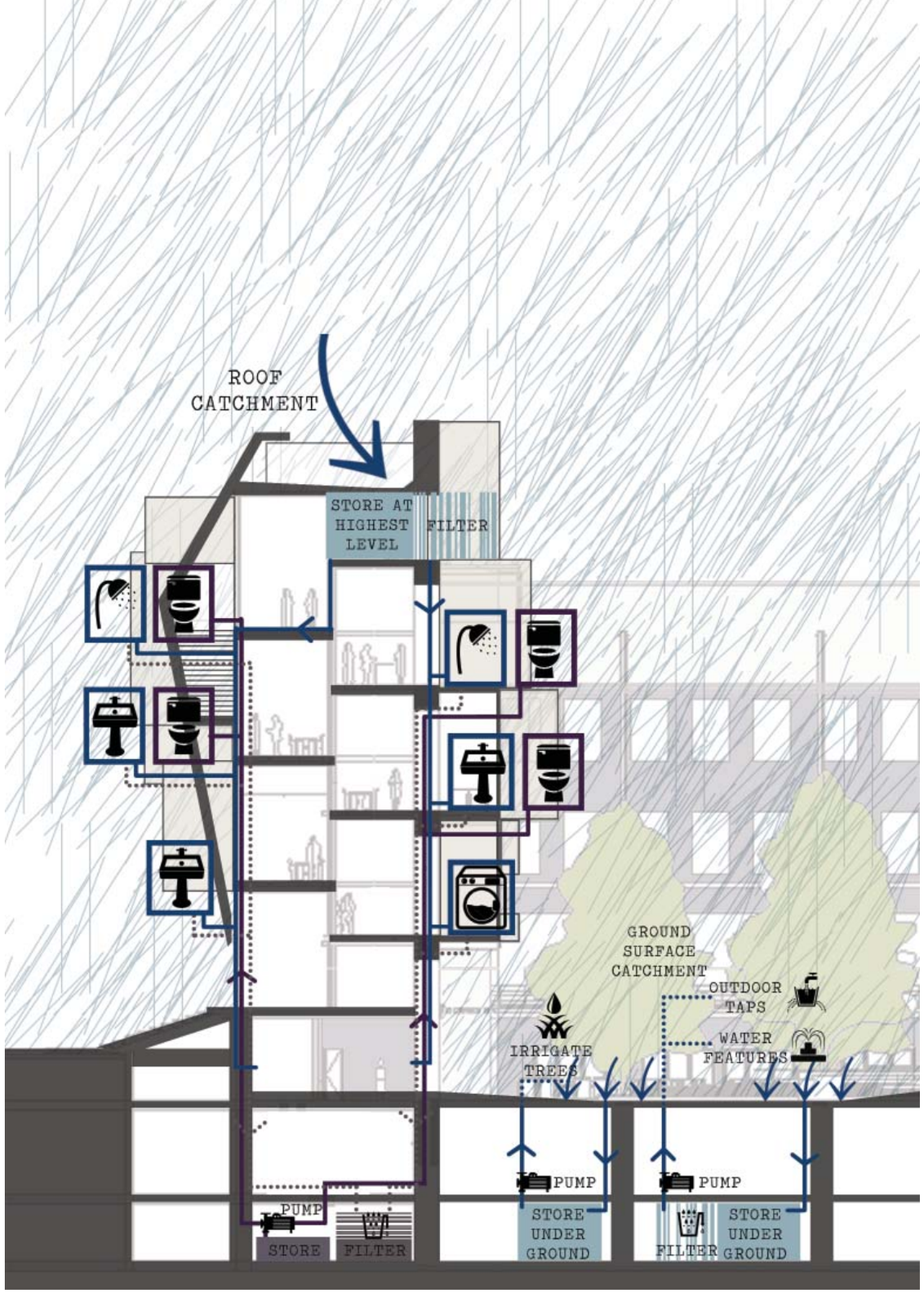


Figure 7.4 ~ Water catchment and recycle diagram.psd

Environmental System

Temperature comfort and daylighting are the two systems that will be tested and iterated. Temperature comfort will be tested in the protruding steel boxes housing various programmes. To achieve the comfort zone between 18˚C to 22˚C for 70% of the time, devices such as solar shading, insulation material and methods to prevent thermal bridging will be used. For the underground dance studio, sufficient daylighting will be tested. Devices to achieve the desired 300lux will include light shafts, interior surface materials and colours, and additional artificial lighting.

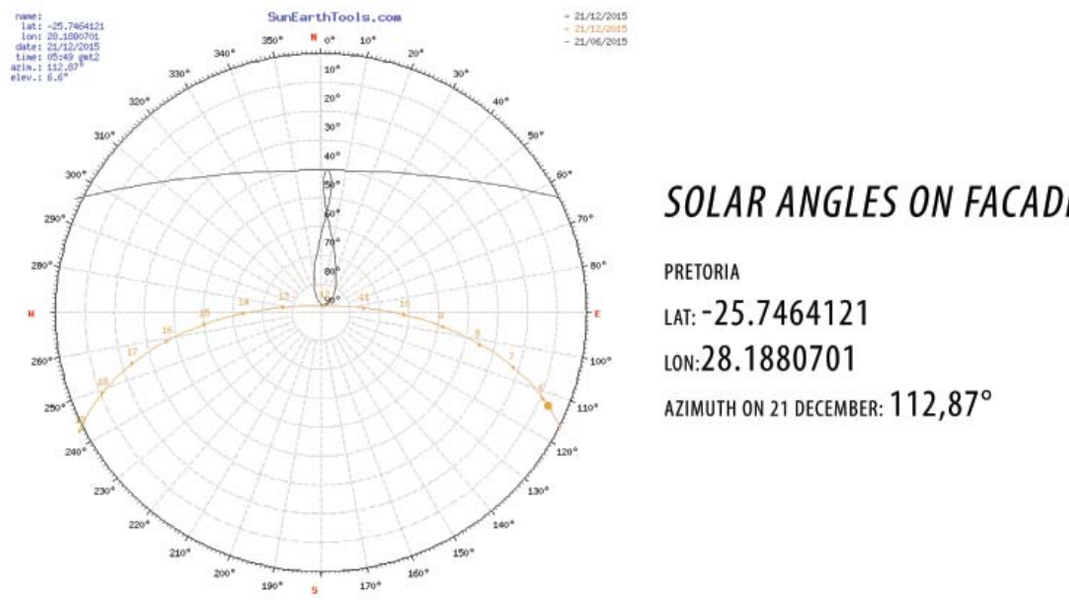


Figure 7.5 ~ Graph of solar ray angles.psd

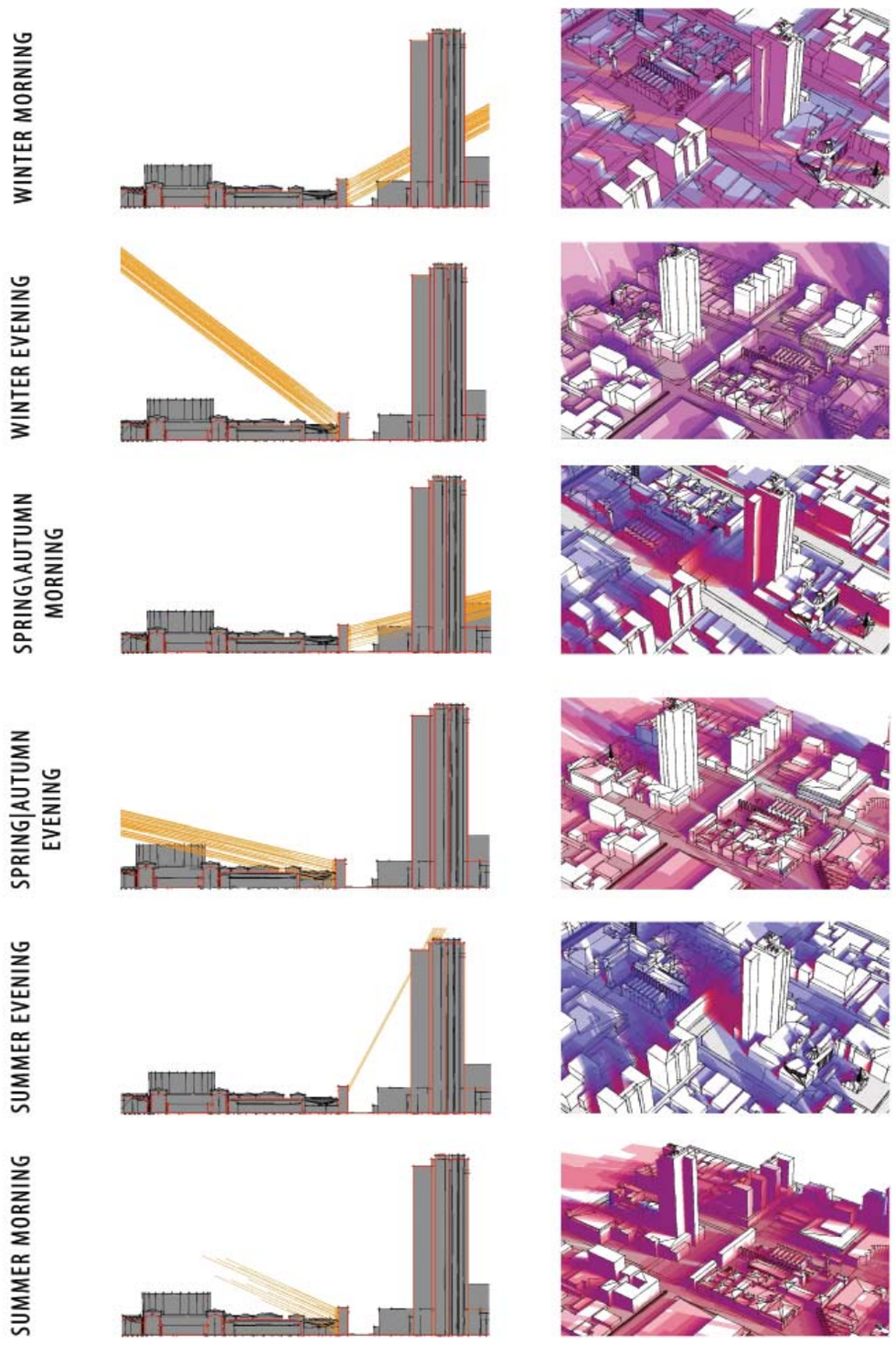


Figure 7.6 ~ Solar ray angles.psd

Sustainability

Locally manufactured materials will be used. This includes bricks, steel work, aluminium wares, cladding materials and glass. Local builders and contractors will be sourced. Furthermore the structure will be able to house other programmes of a similar nature, its architecture does not limit its ability to adapt. The grid however limits the programmes to small businesses and services ideal for the entrepreneur trying to get into the market. The primary structure of brick, steel and concrete on a fixed grid can be supplemented with a myriad of other light fill-in partitions to adapt it for specific programmes.

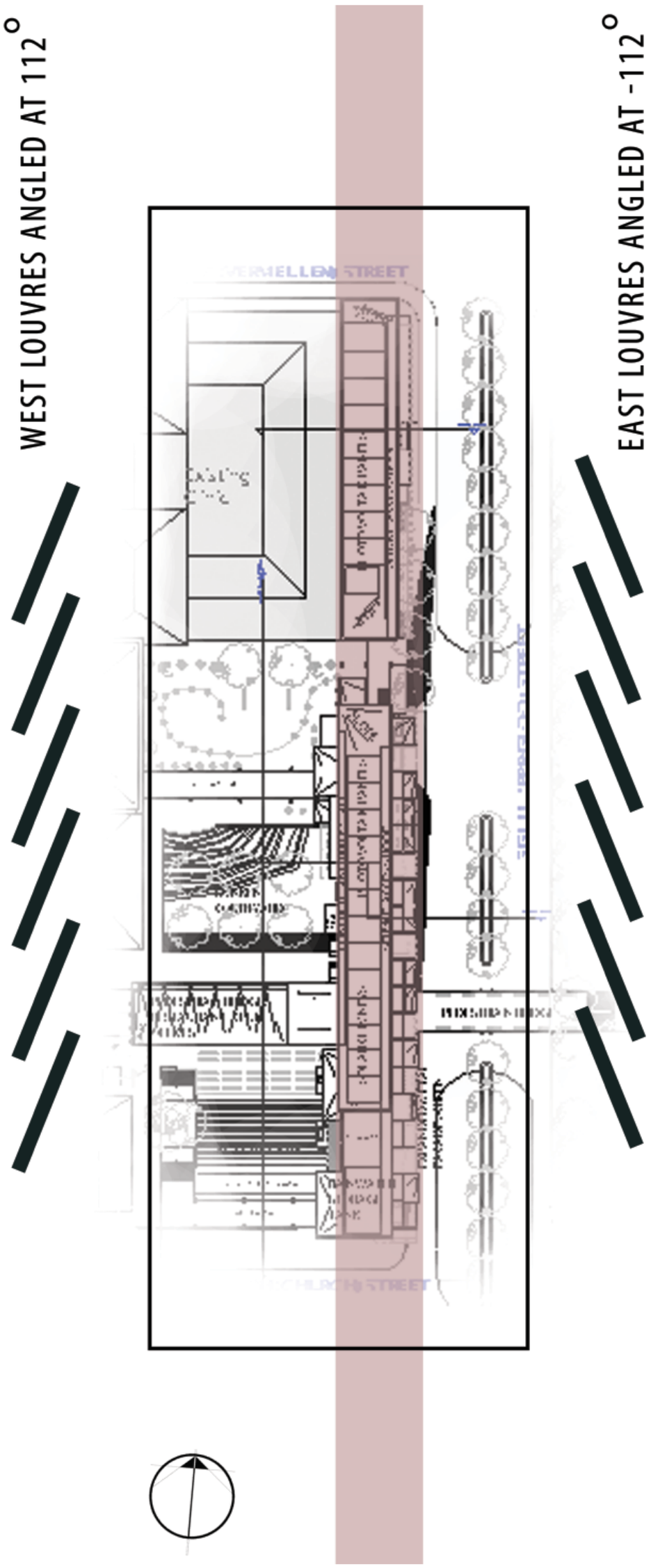


Figure 7.7 ~ Ideal angles for solar louvres.psd

TECHNICAL DEVELOPMENT

Site sections

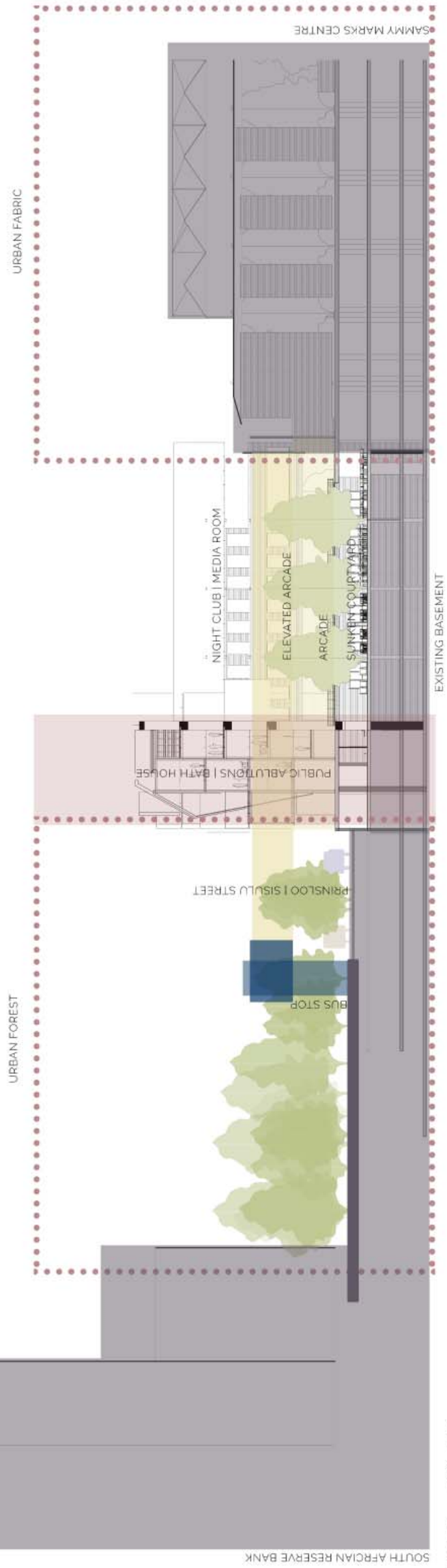


Figure 7.8 ~ East west site section.psd

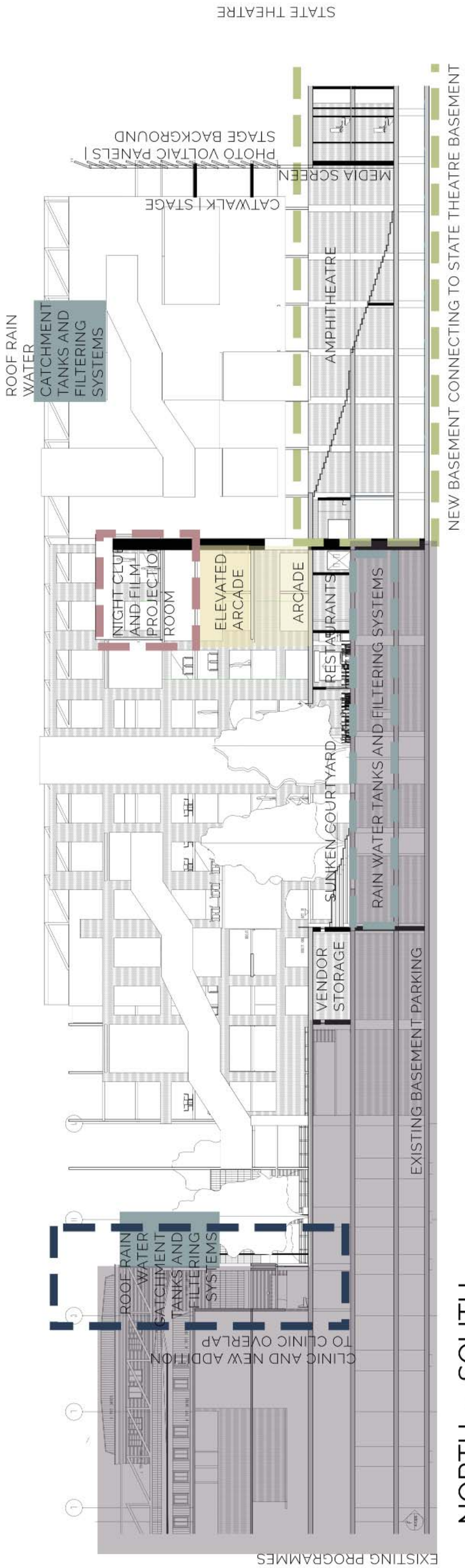


Figure 7.9 ~ North south site section.psd

Clinic section

Figure 7.10 ~ Clinic site section.psd

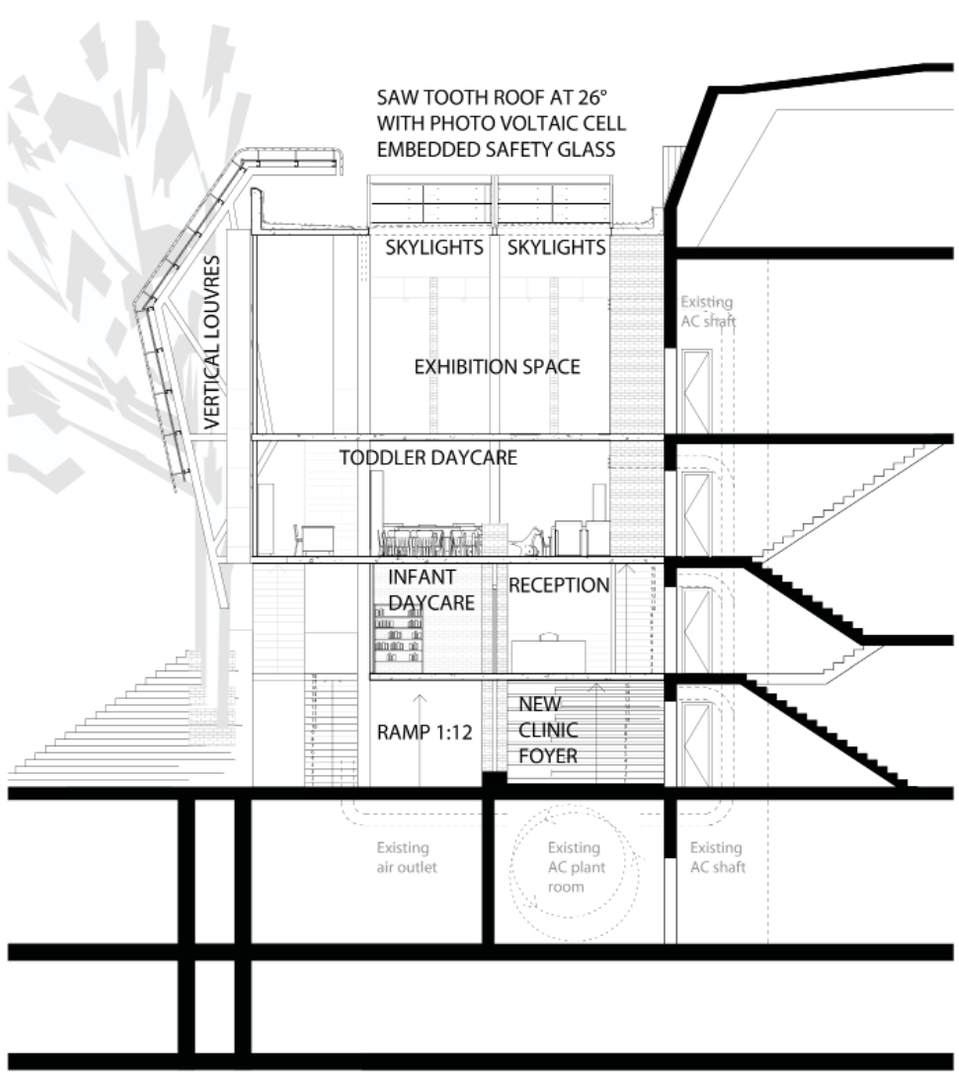


Figure 7.11 ~ Clinic section.psd

Floor plans

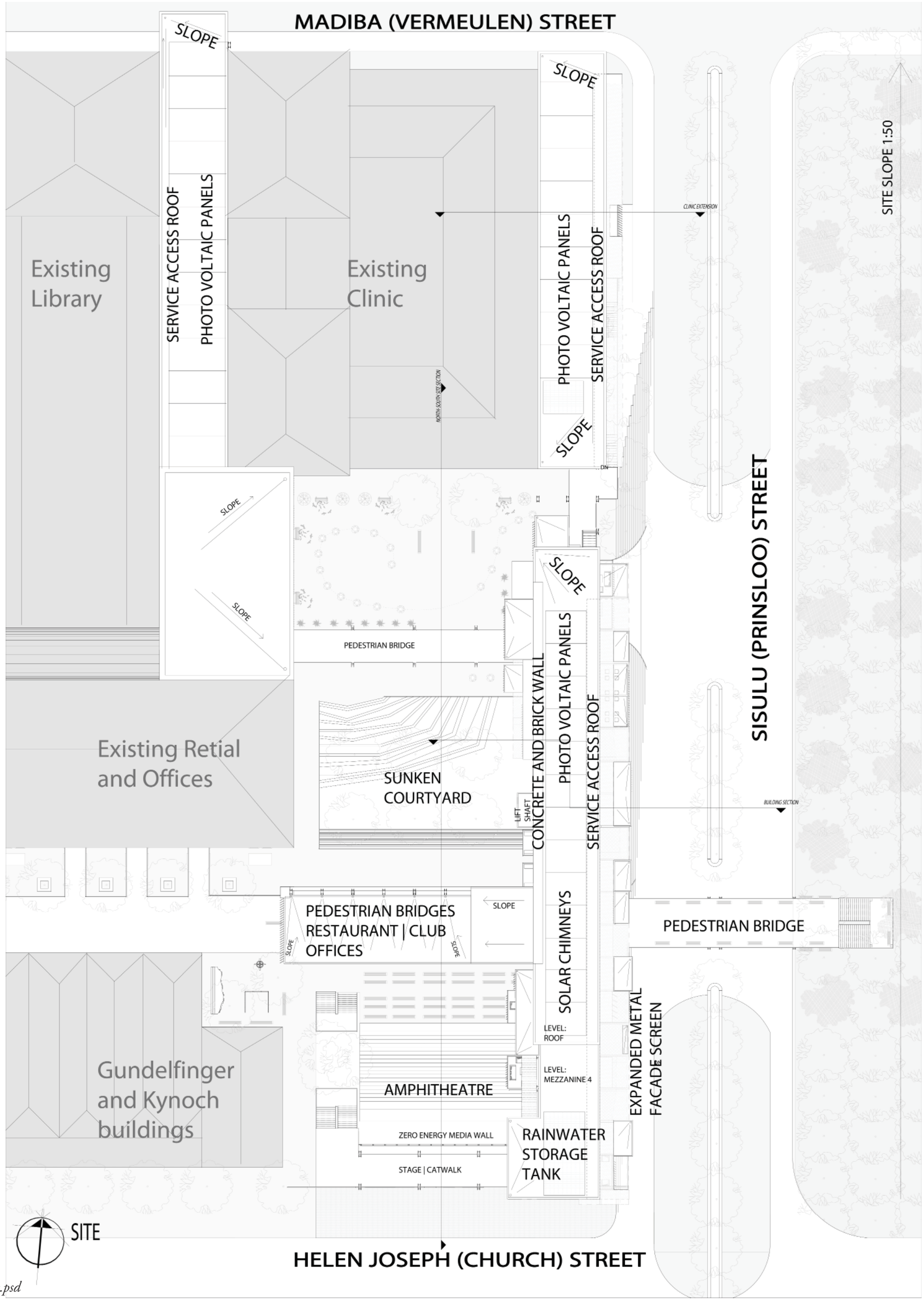


Figure 7.12 ~ Site.psd

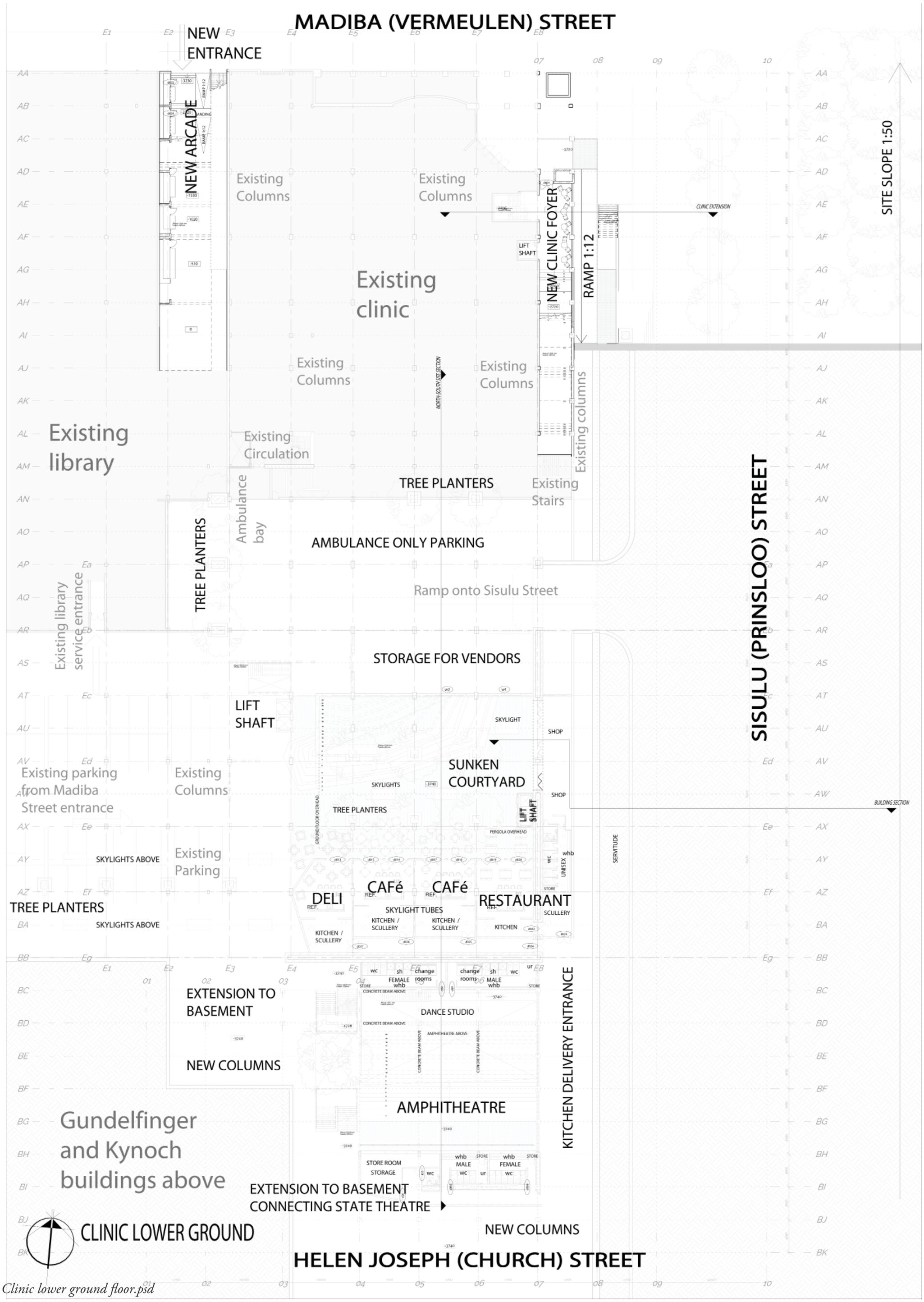


Figure 7.13 - Clinic lower ground floor.psd

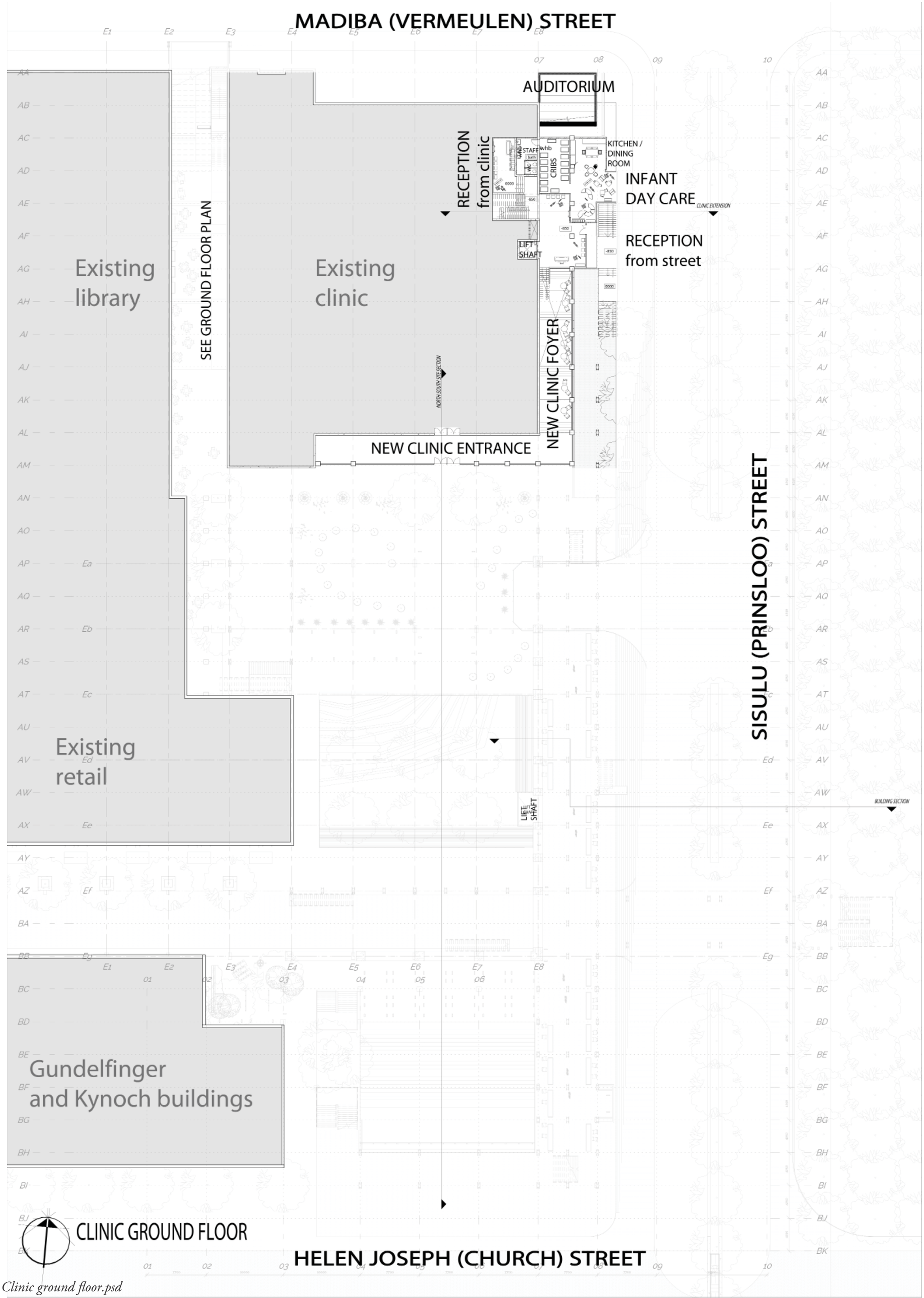


Figure 7.14 ~ Clinic ground floor.psd

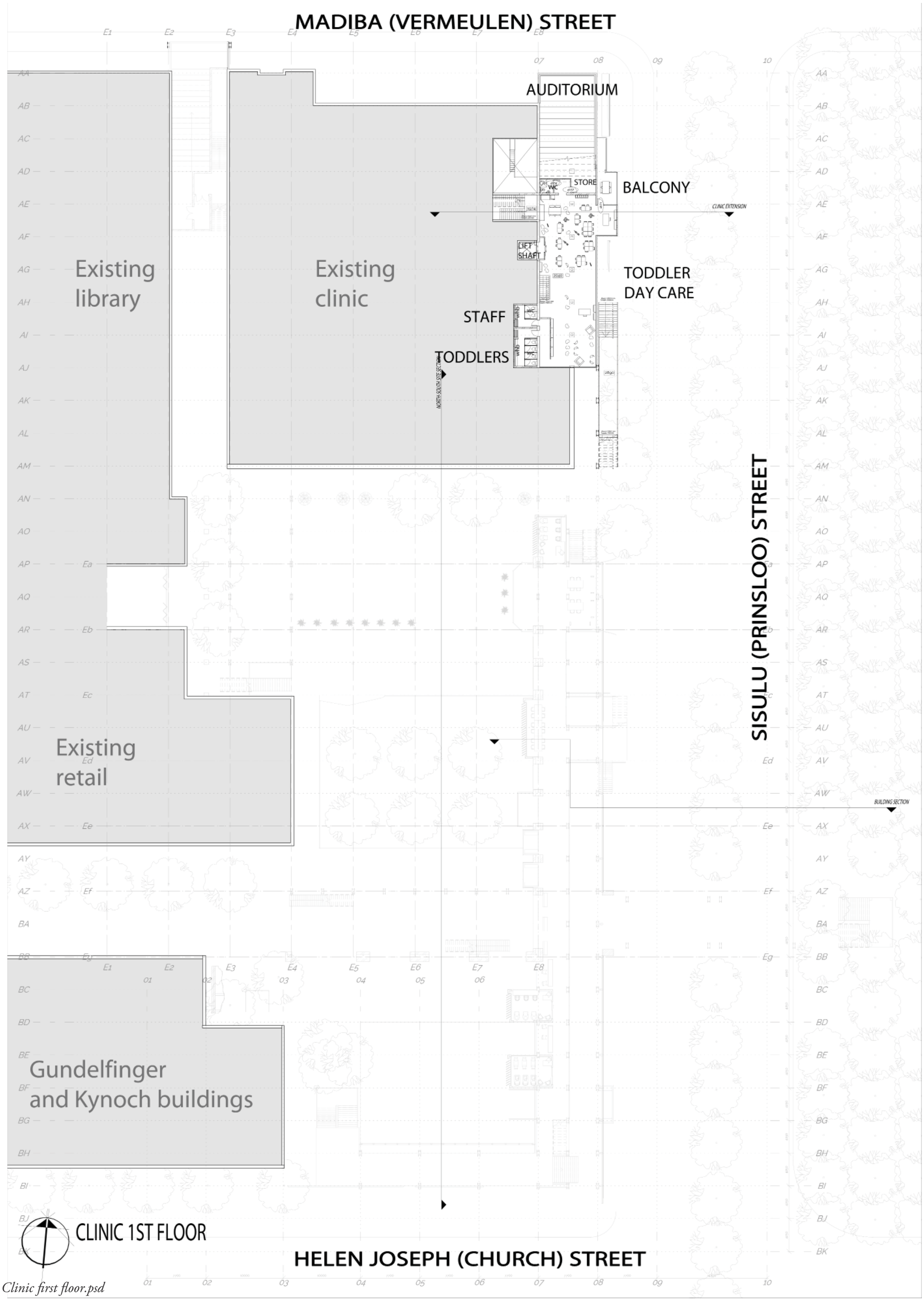


Figure 7.15 ~ Clinic first floor.psd

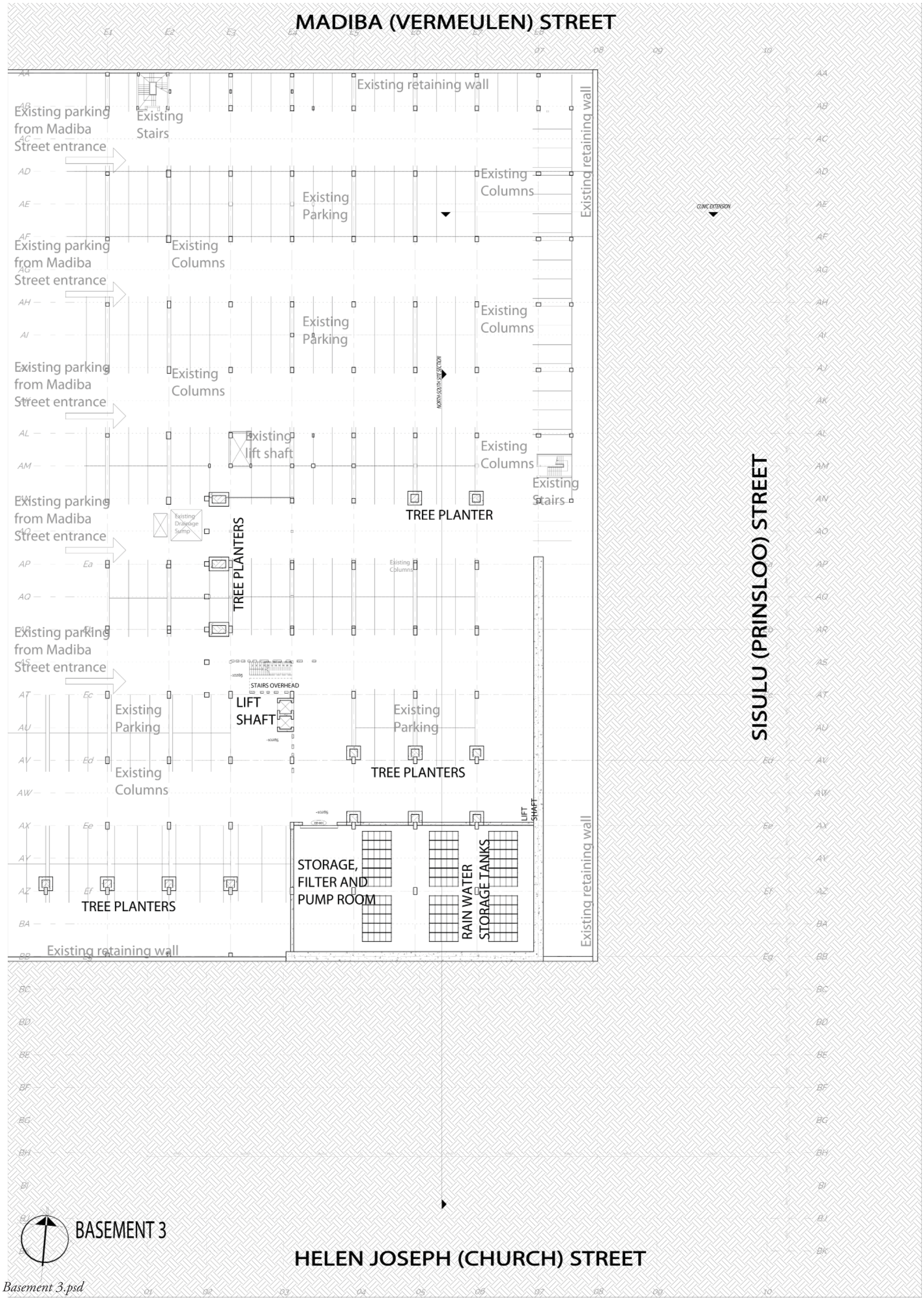


Figure 7.16 - Basement 3.psd

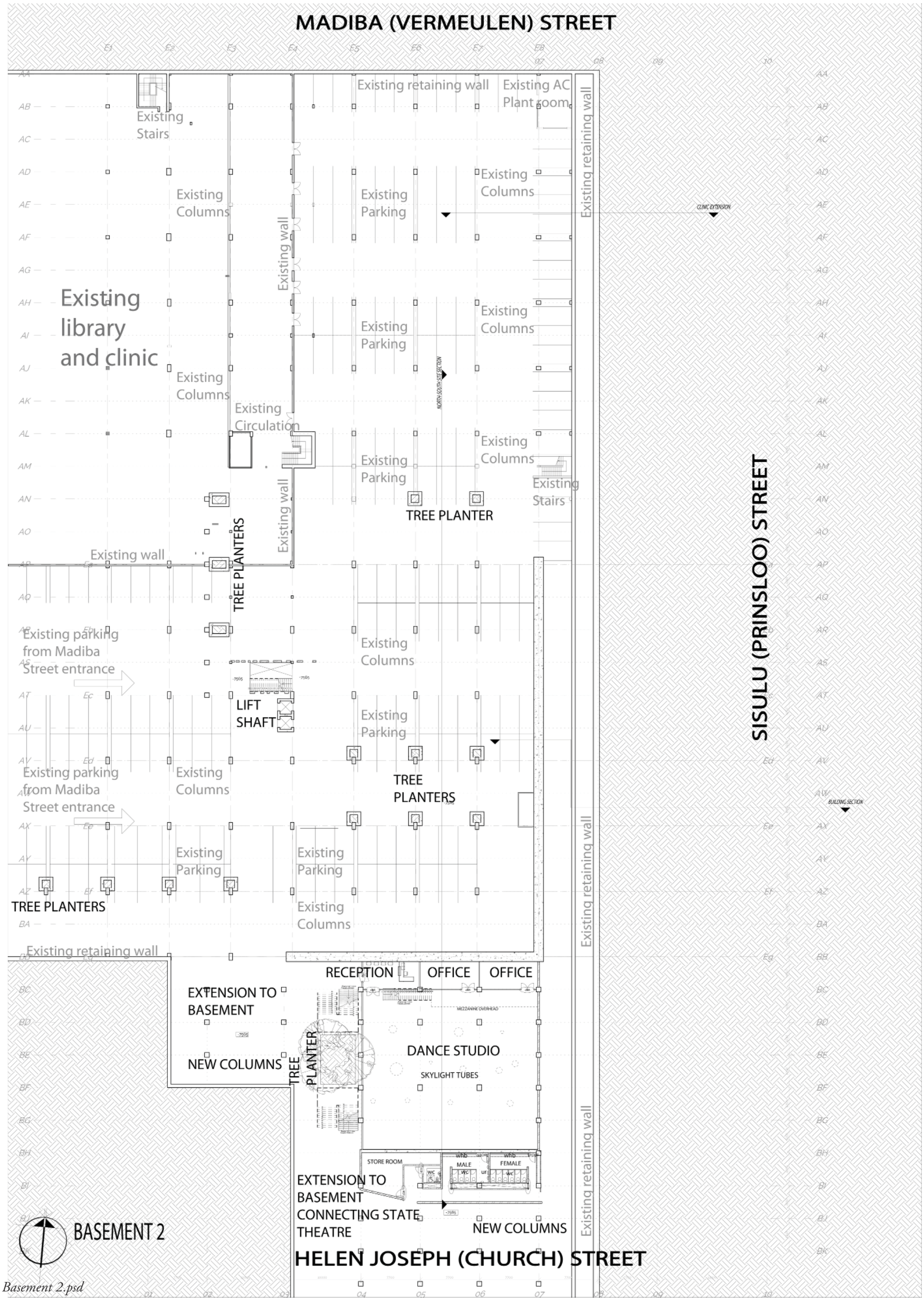


Figure 7.17 ~ Basement 2.psd

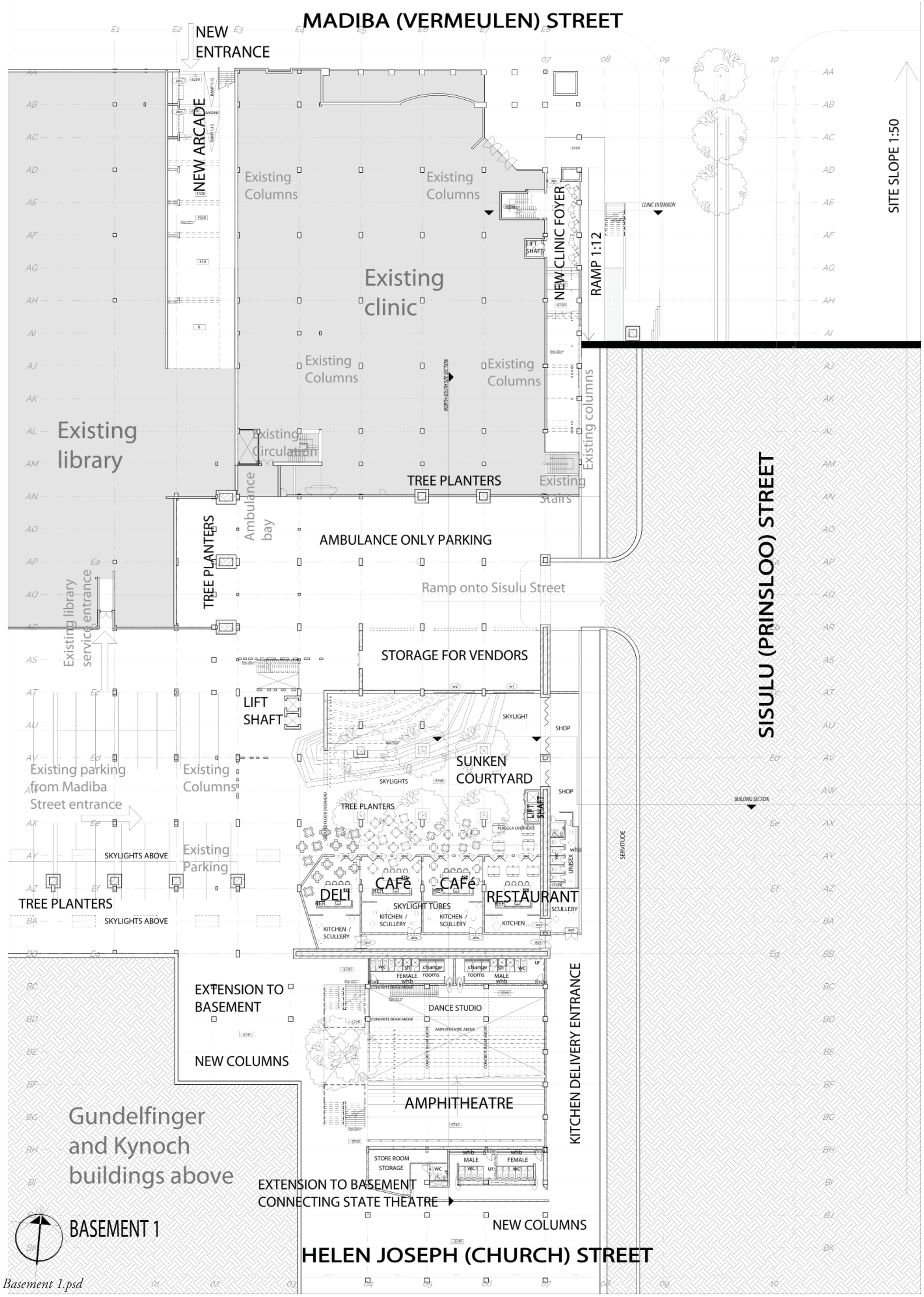


Figure 7.18 - Basement 1.psd

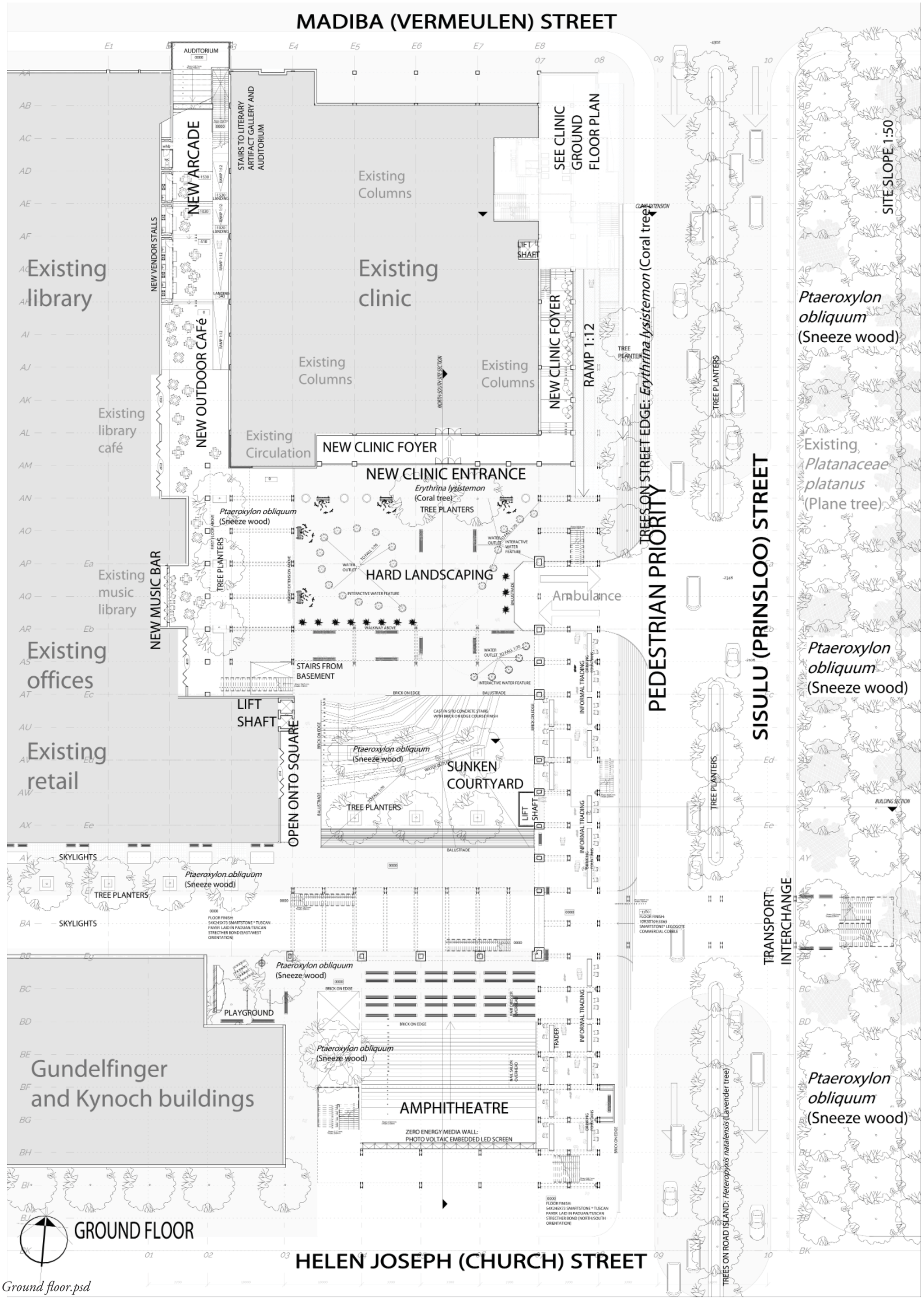


Figure 7.19 ~ Ground floor.psd

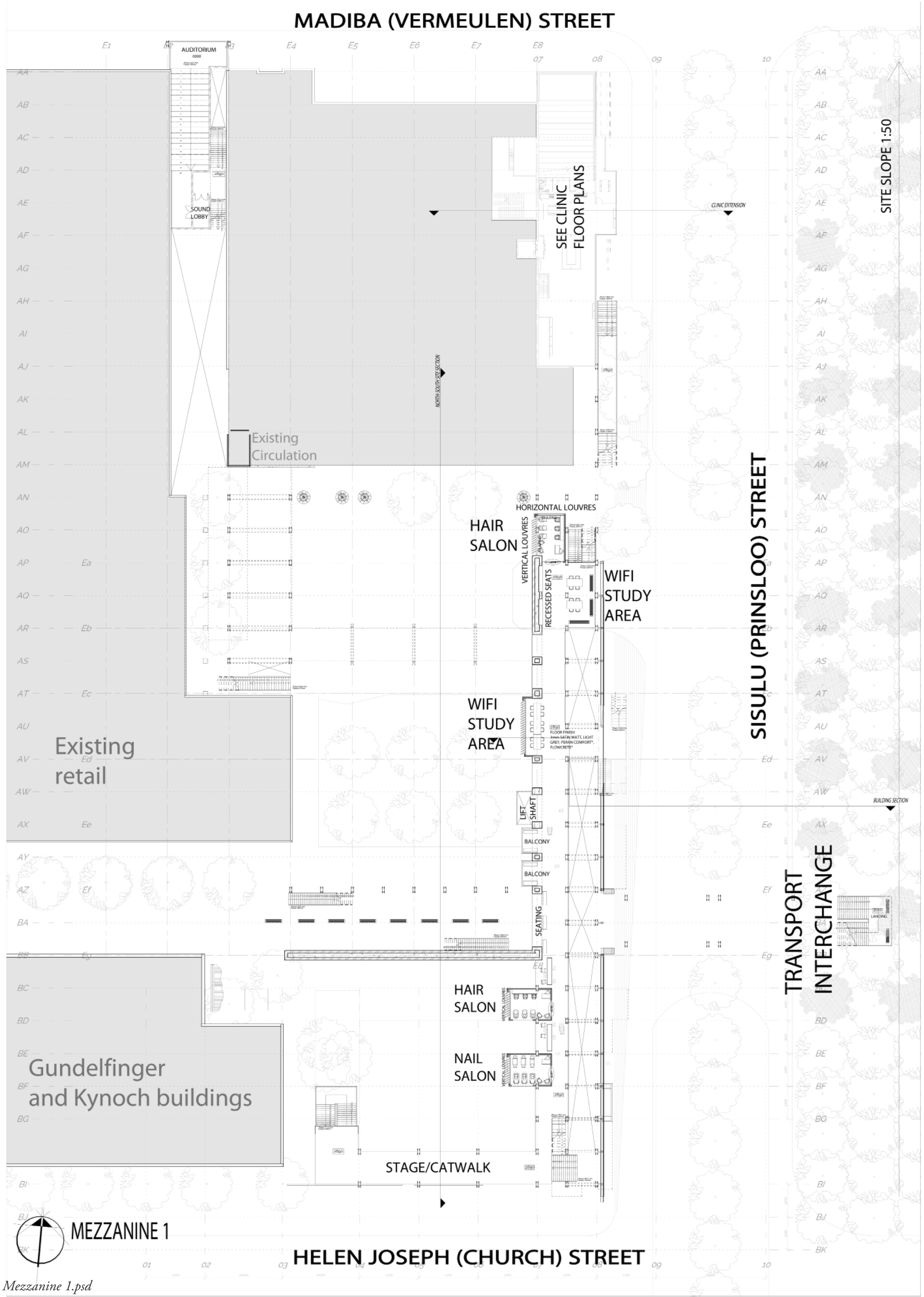


Figure 7.20 ~ Mezzanine 1.psd

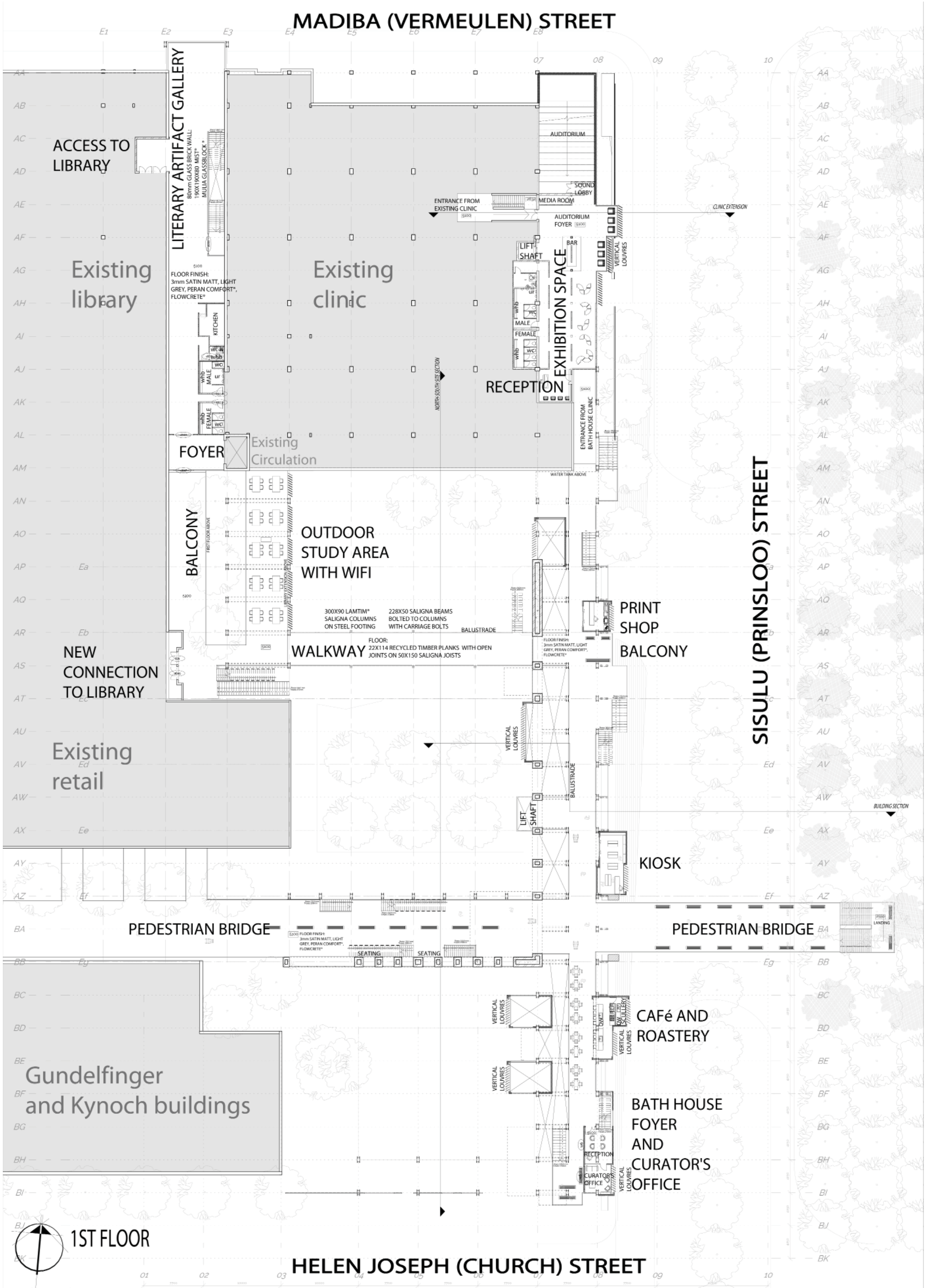


Figure 7.21 ~ First floor.psd

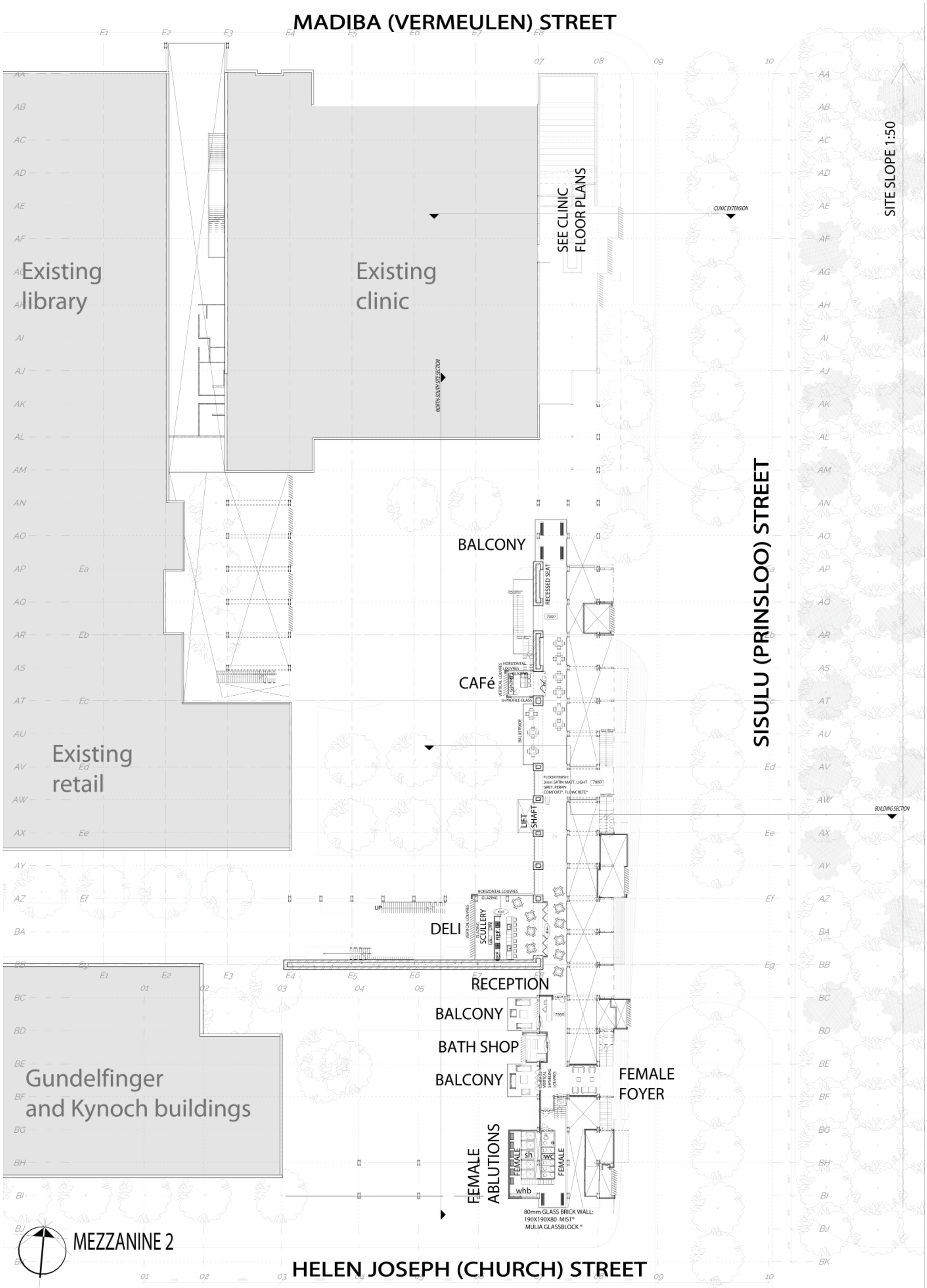


Figure 7.22 ~ Mezzanine 2.psd

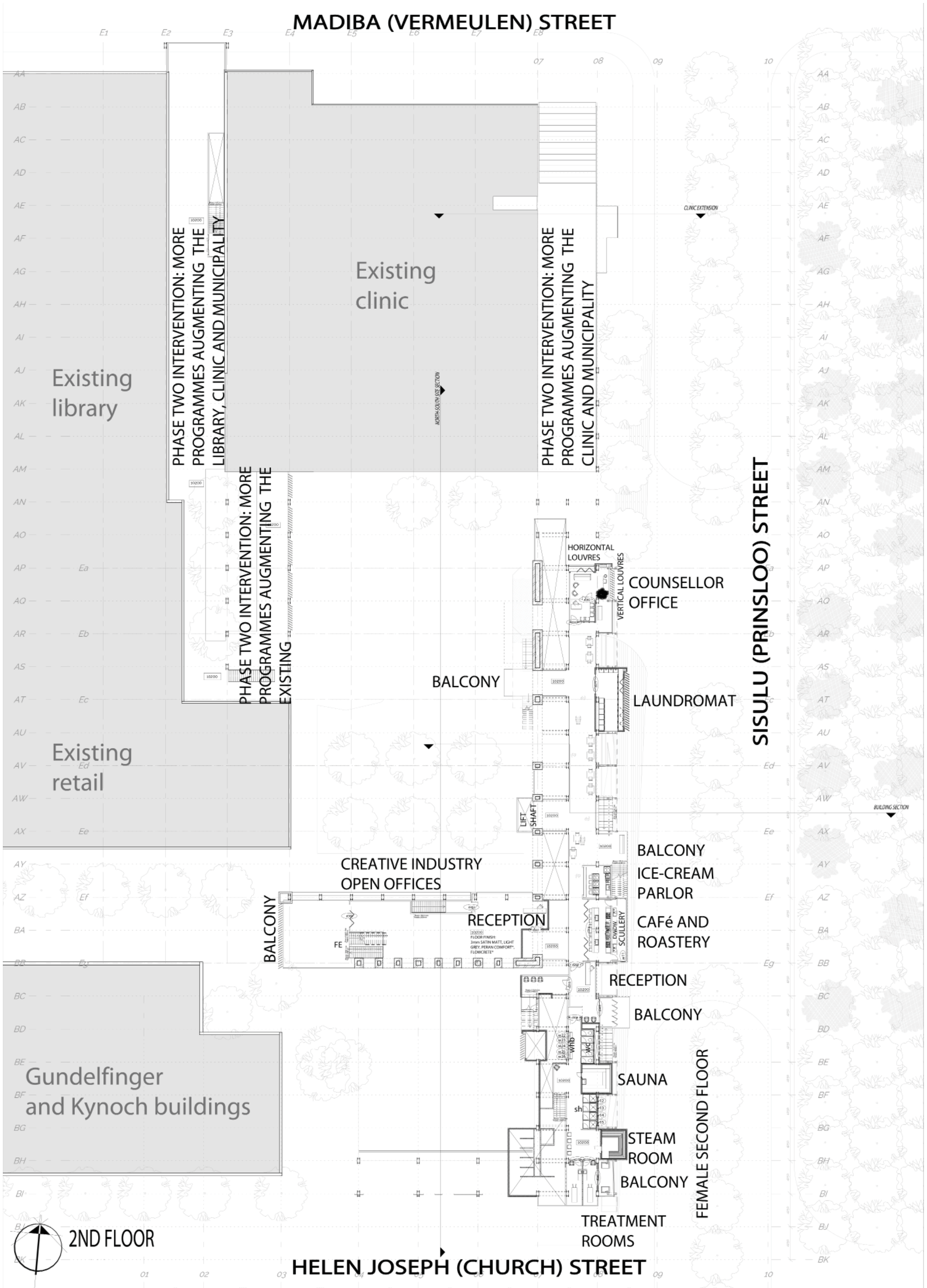


Figure 7.23 ~ Second floor.psd

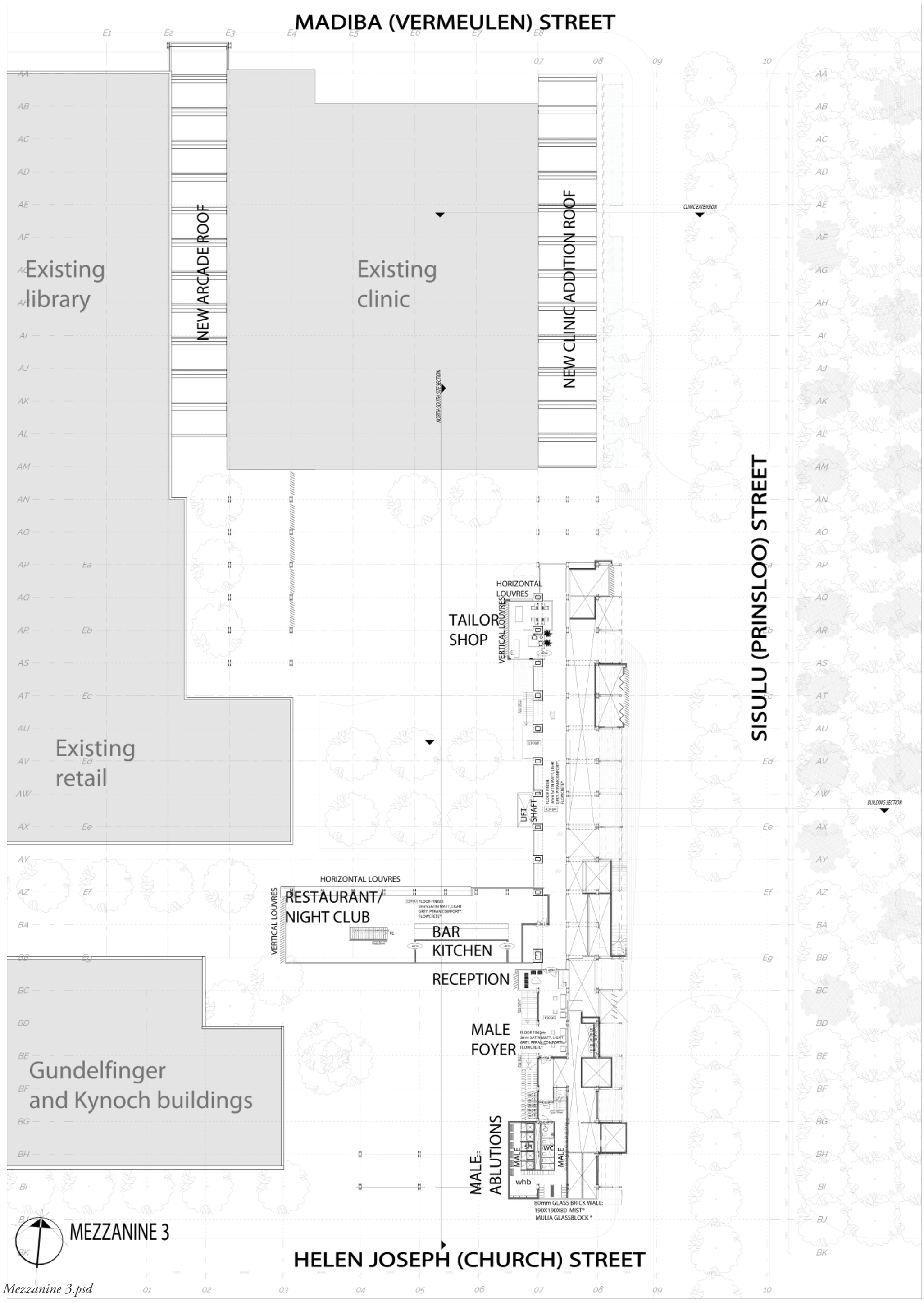


Figure 7.24 ~ Mezzanine 3.psd

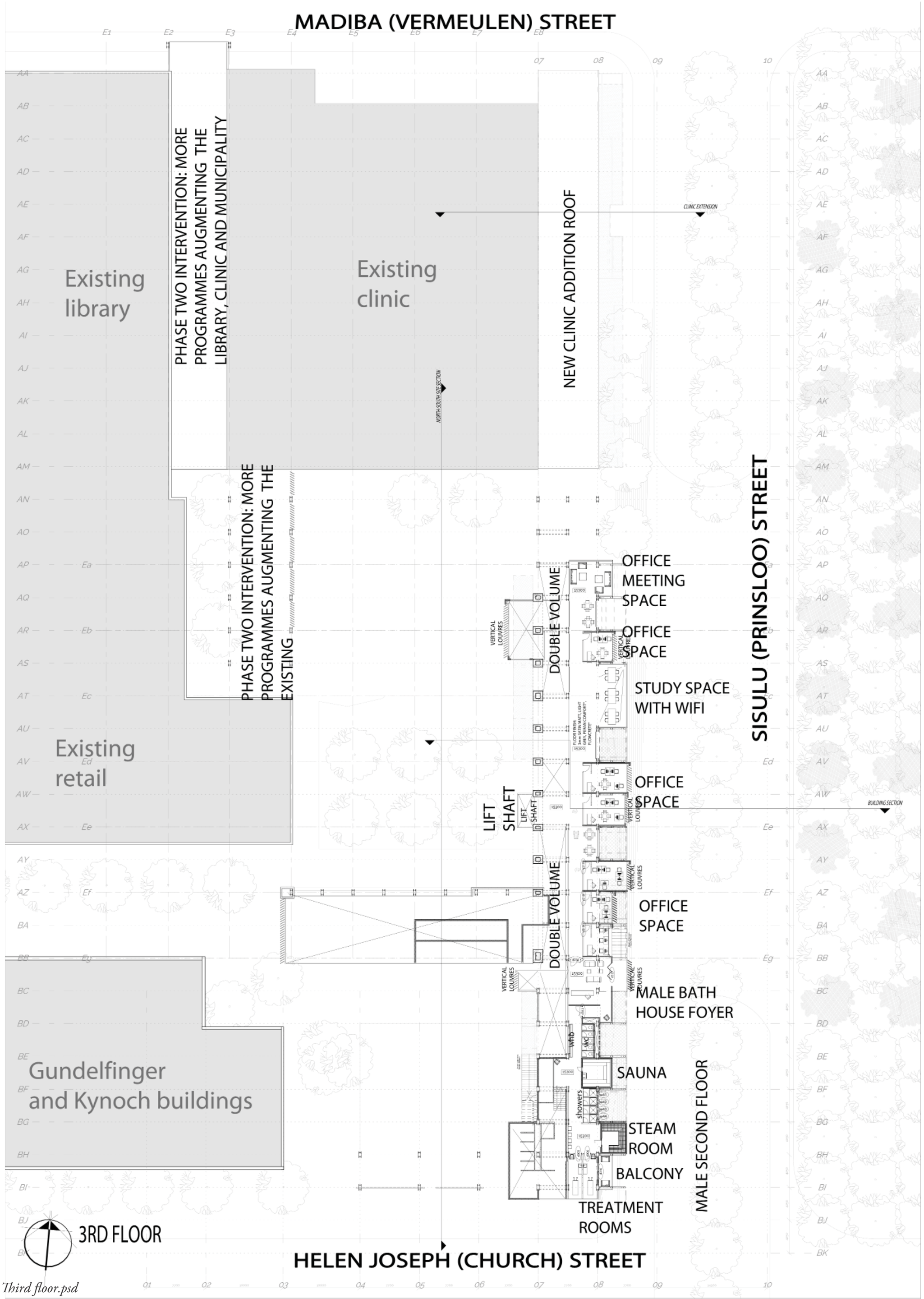


Figure 7.25 ~ Third floor.psd

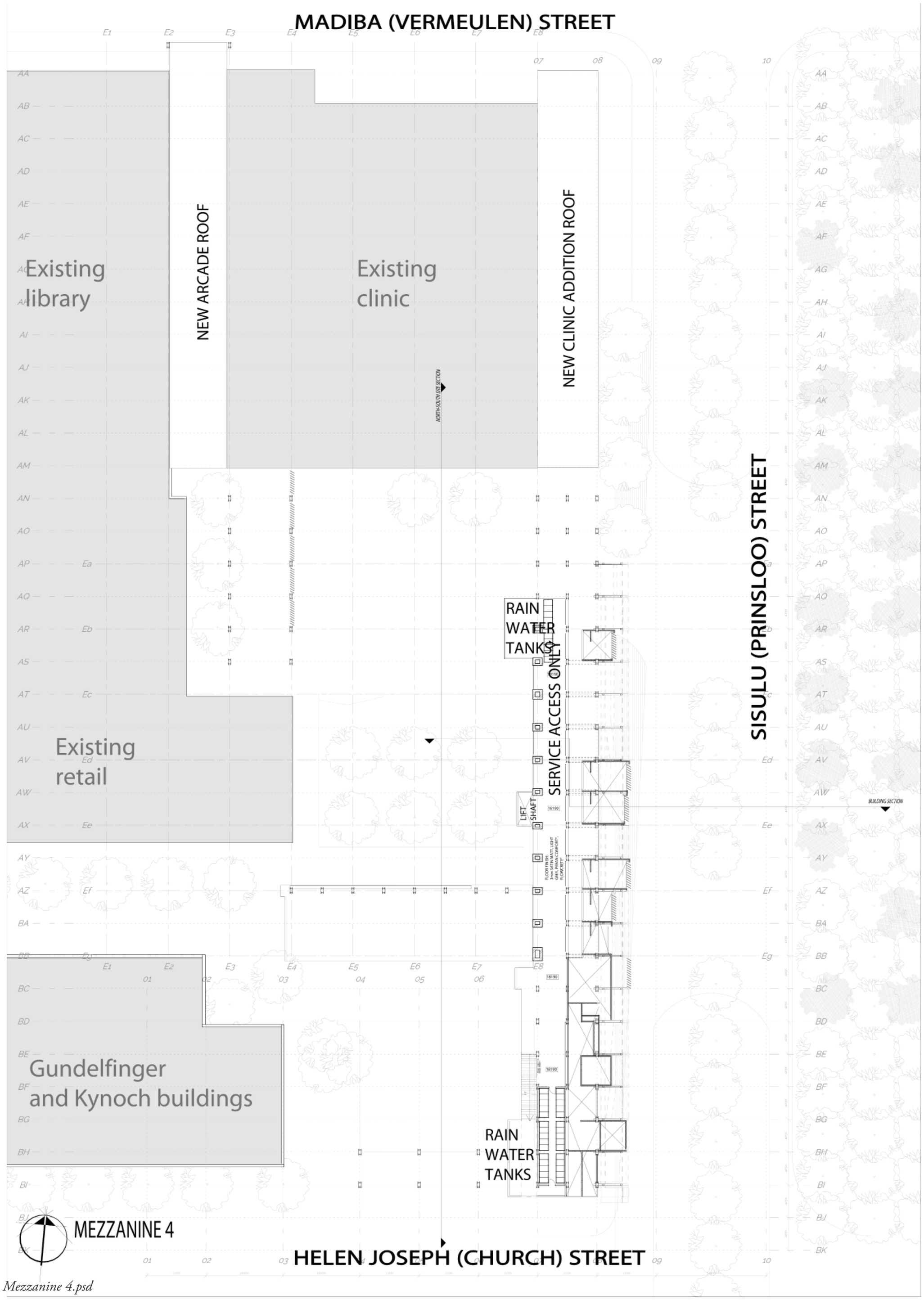


Figure 7.26 ~ Mezzanine 4.psd

Sections

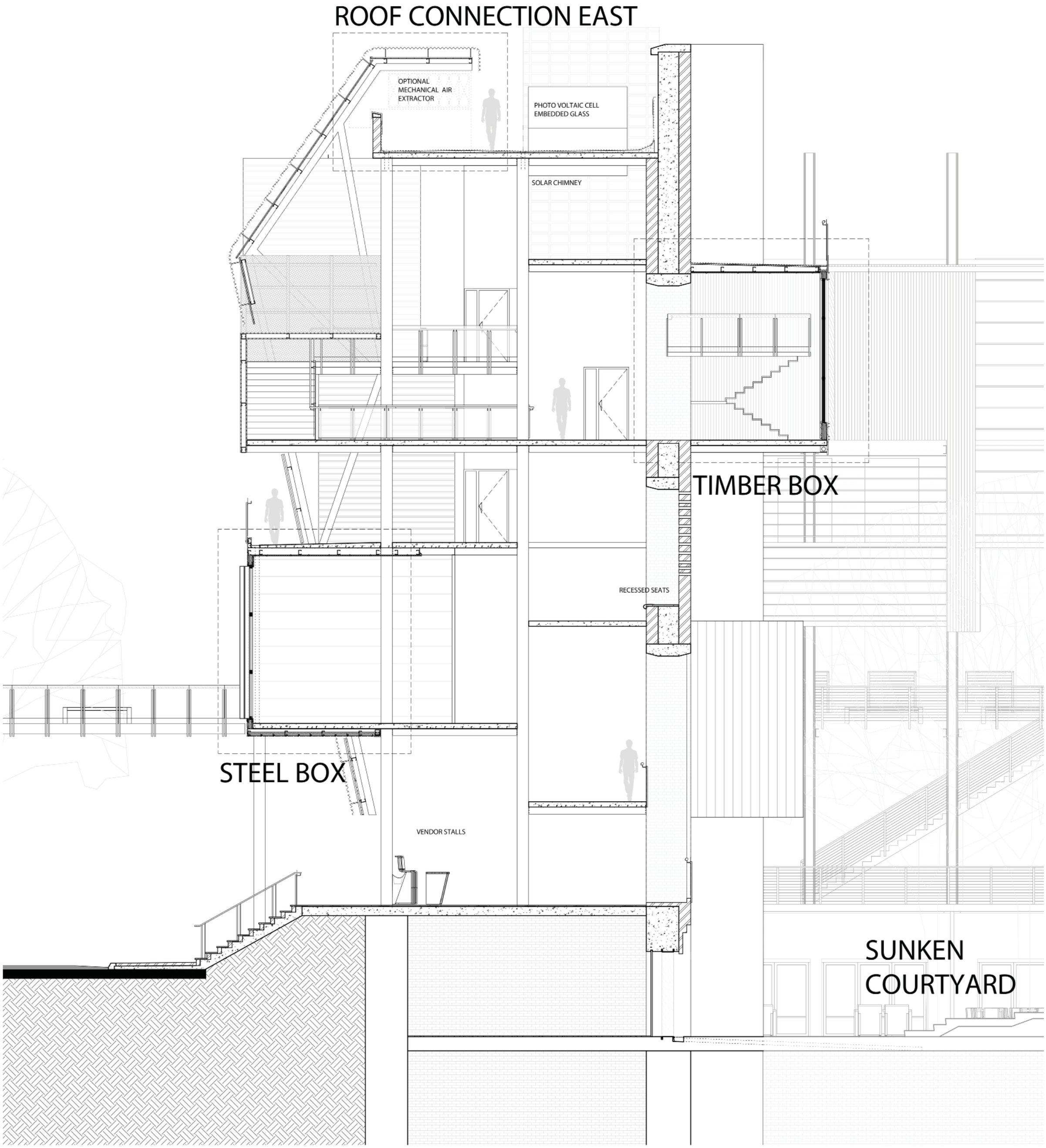


Figure 7.27 ~ Building section.psd

STEEL BOX

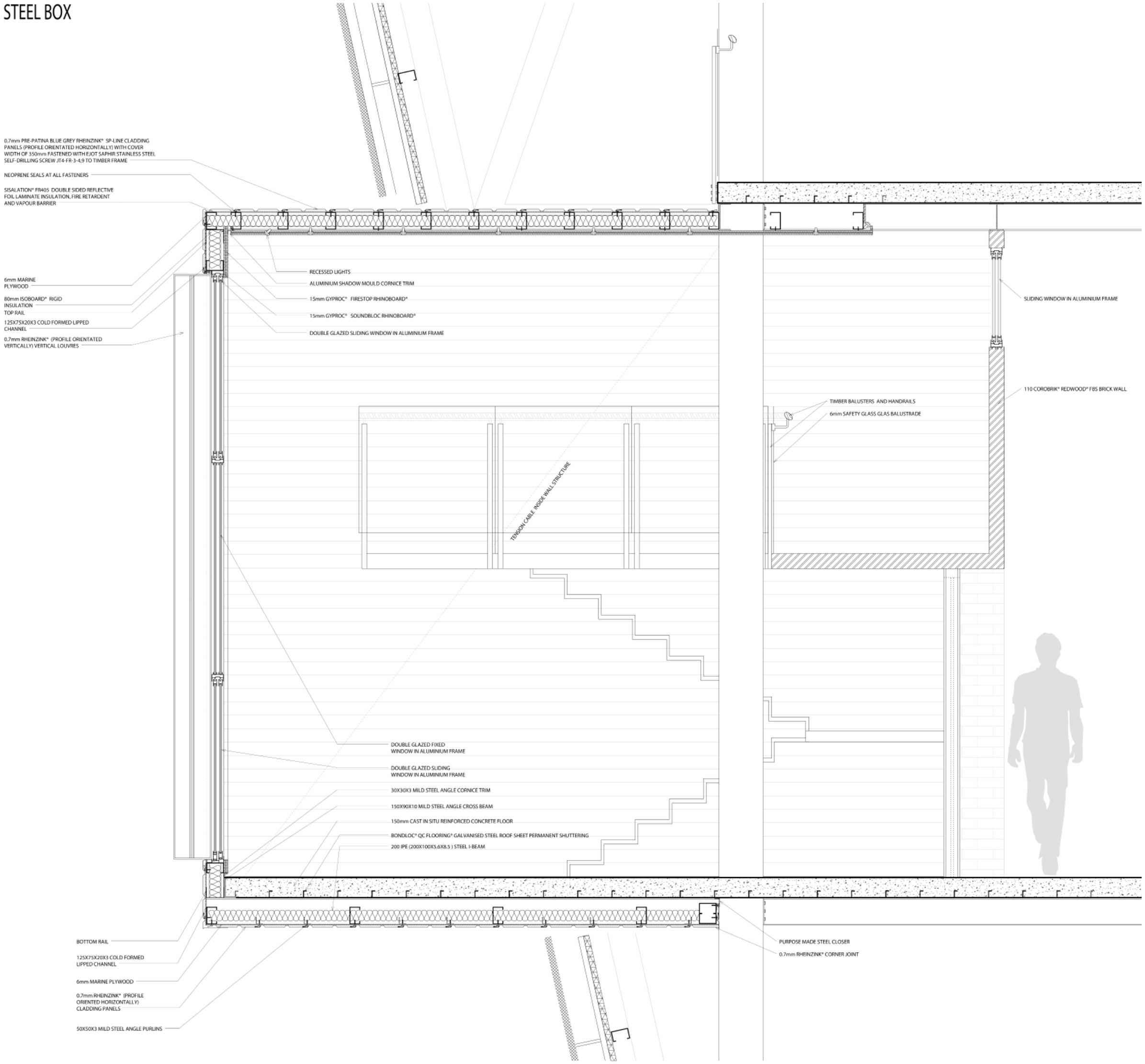


Figure 7.28 ~ Steel box section.psd

TIMBER BOX

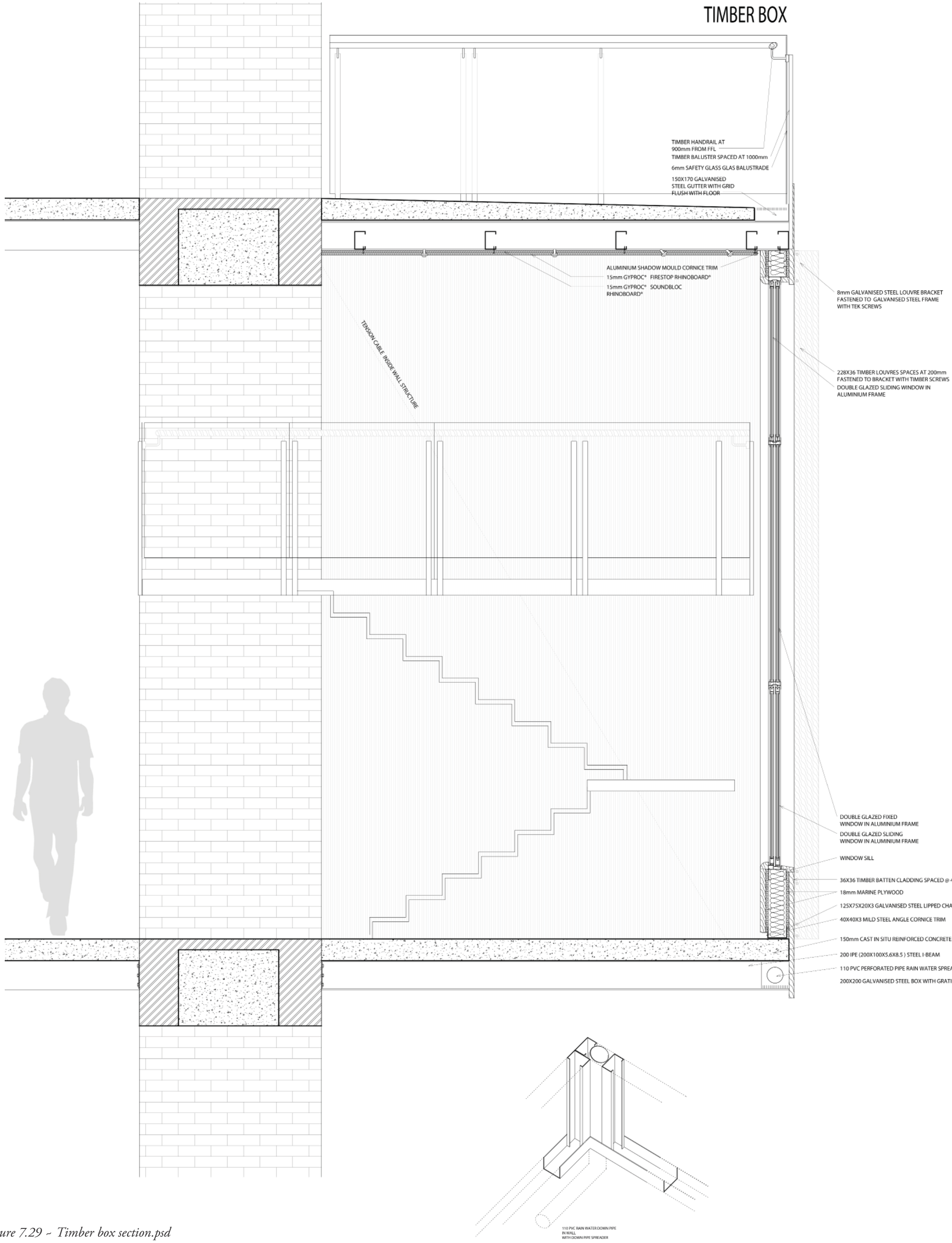


Figure 7.29 ~ Timber box section.psd

ROOF CONNECTION EAST

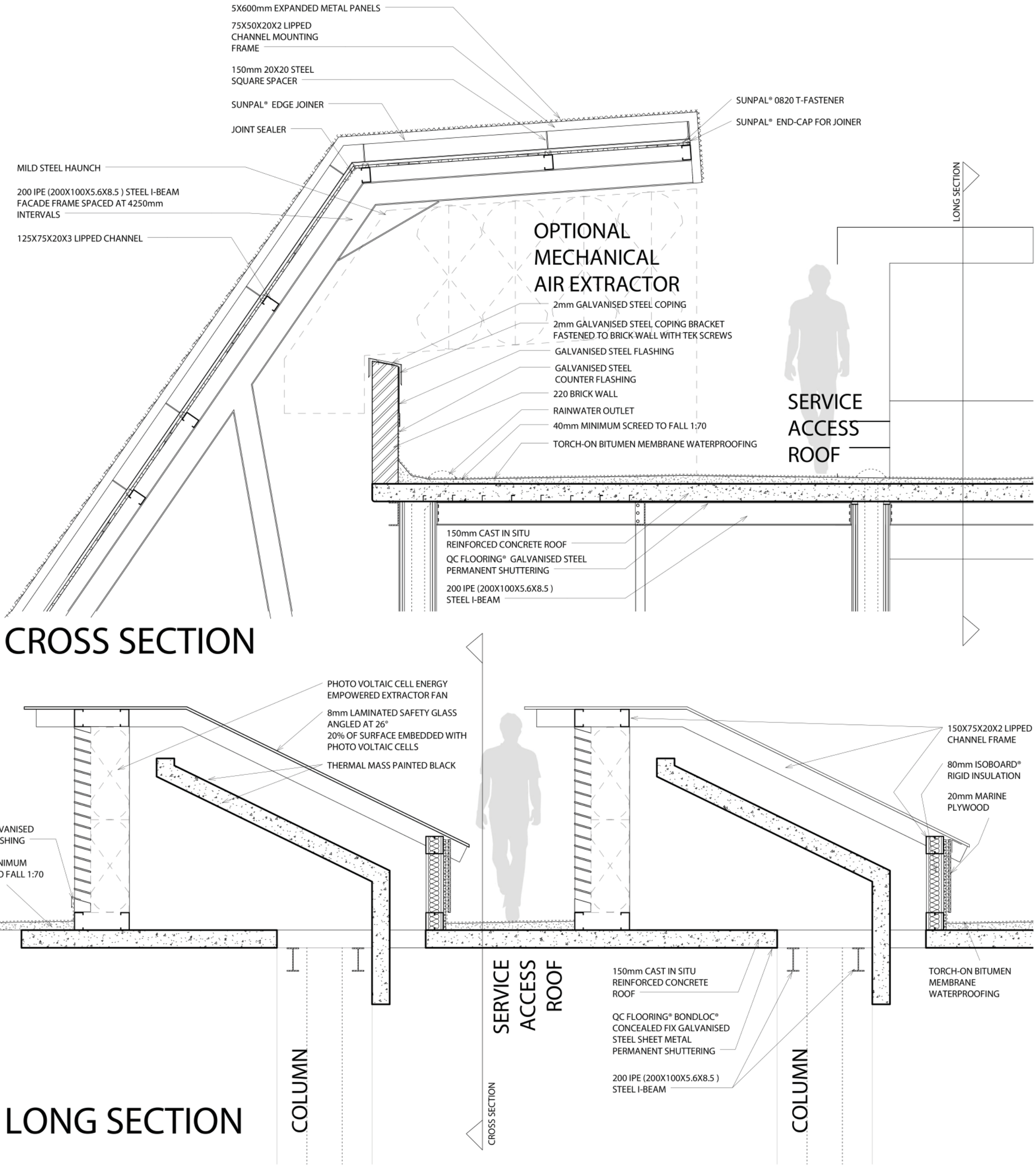


Figure 7.30 ~ Roof connection east.psd

Elevation

Figure 7.31 ~ East elevation.psd

SISULU (PRINSLOO) STREET

HELEN JOSEPH (CHURCH)SHTREET

Figure 7.32 - Perspective from south.psd

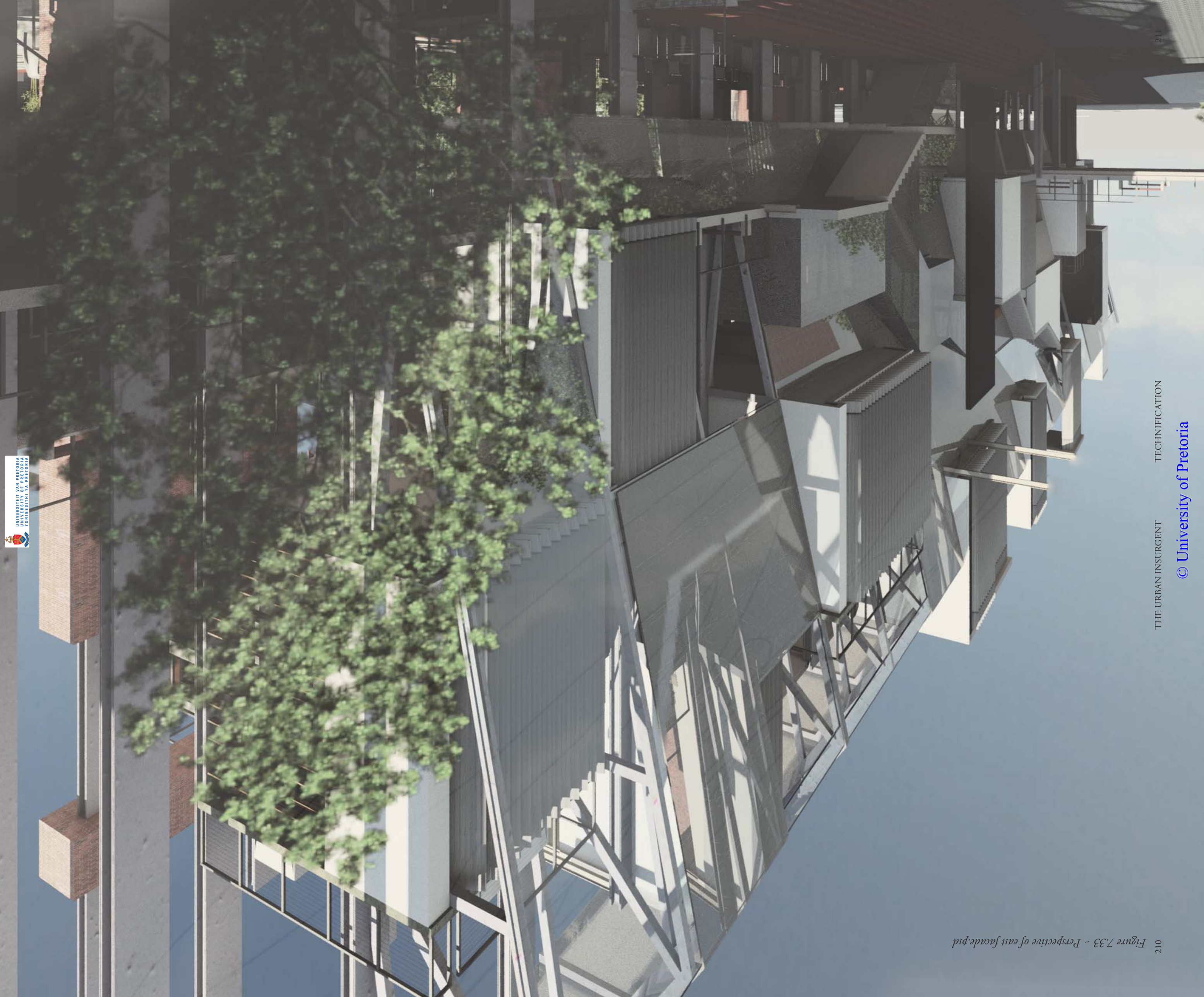


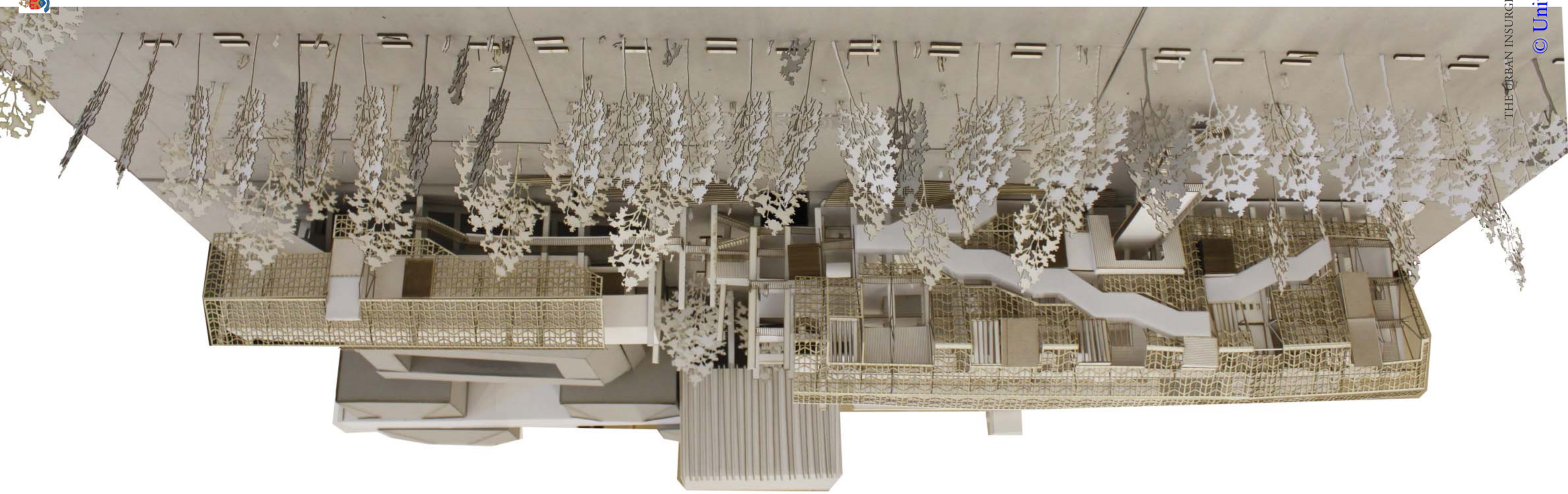
Figure 7.33 - Perspective of east facade.psd

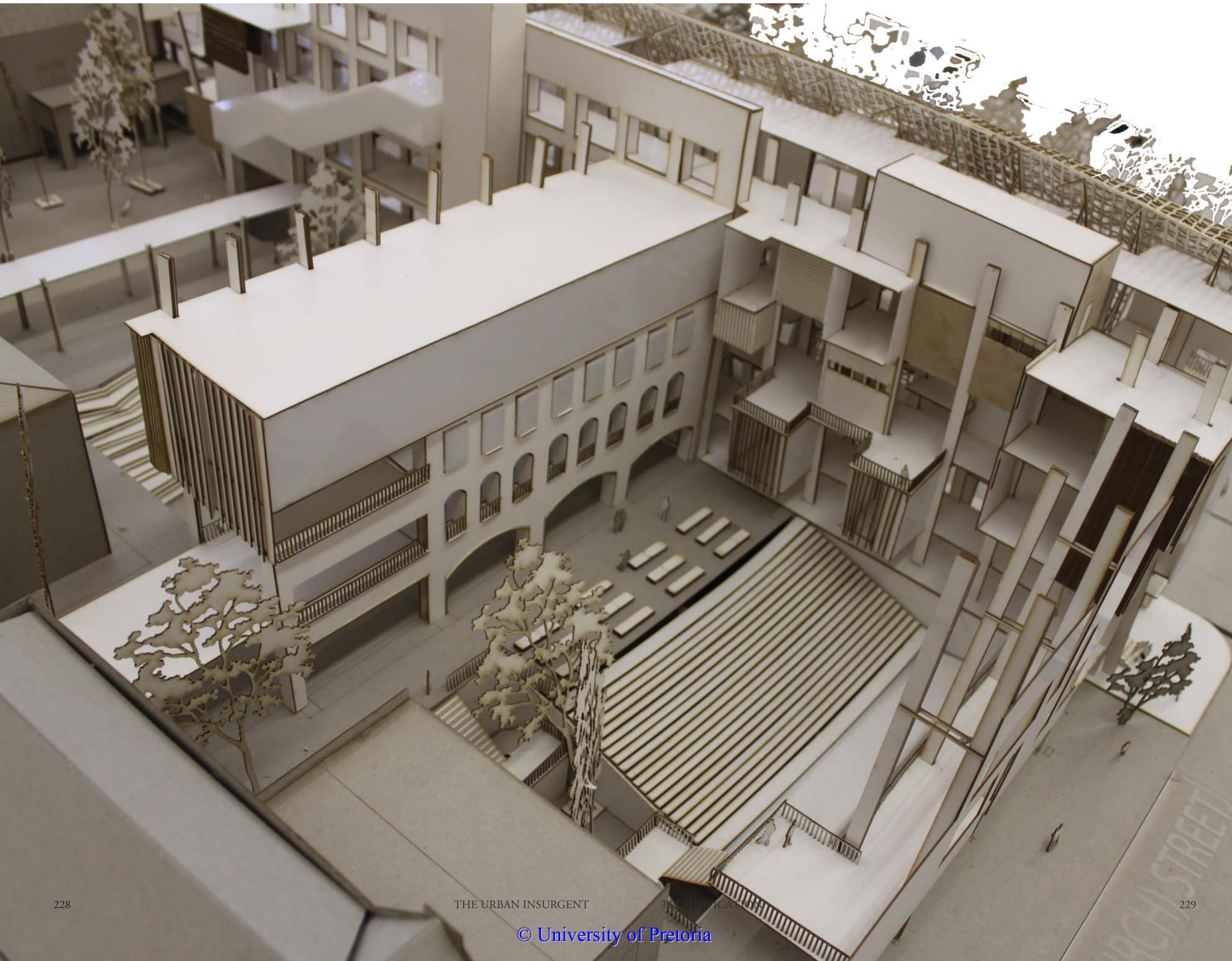
Figure 7.34 - View from Sisulu Street.psd

Figure 7.35 ~ Sunken courtyard.psd

Figure 7.36 - Courtyard.psd

Figure 7.37 - Interior view on ground floor level. sd





CHAPTER 8

CONCLUSION

The hope is that this device will succeed in its intend to not only connect the programmes on site into a larger programmatic whole, but also connect the city user with the city through haptic human scaled architecture. The device bring the narratives of the site to the fore and exposes the city dweller to the various programmes currently hidden in the urban built fabric. The device also bridges the threshold between the Urban Forest and the Urban Built Fabric through the detail articulation of the structure. The device serves as a public amenity with ablutions, retail and other functions. It serves as a spaces for repose, interact, rest and moving through. As a stoep into the city, due to its location, programmes and structure, it becomes the place where people gather before they go to work or before they leave the city to go home.

The believe is that the design set out what it aimed for and has alot of potential for futher development into a smaller transport interchange as well as being a catalyst for similiar insugent devices in cold and inhuman spaces in the city. Devices that give identity and brings coherence.

TABLE OF FIGURES

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