

# CIVIC KNOT

An urban platform for social engagement at the Pretoria Station



by Matthys Johannes Barnard

Pretoria, South Africa  
2017

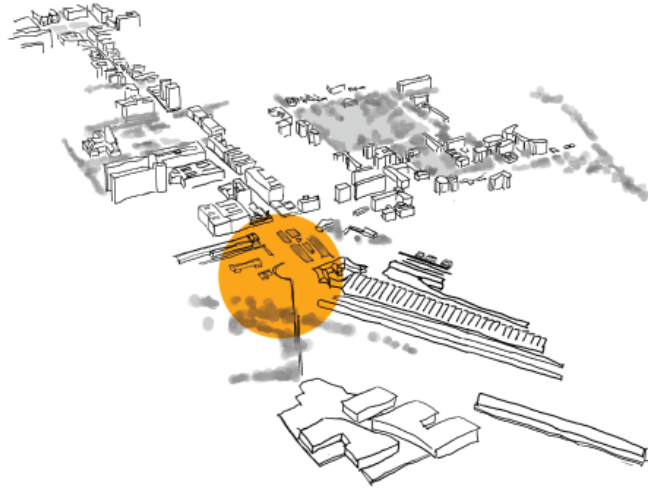


Figure 1. Aerial perspective of Pretoria, and the Paul Kruger Street axis to Church Square, with highlighted site at Pretoria Station.

## CIVIC KNOT

### FUNCTION

Department Of Home Affairs, Retail anchor, Clinic and Restaurants

### ADDRESS

Scheiding Street (Pretoria Station Precinct)  
Pretoria  
South Africa  
25°45'29"S 28°11'21" E

### FIELD

Human Settlements and Urbanism

### CLIENT

Municipality of Tshwane

### PREMISE

Social media, mainstream media and the predominance of visual engagement is contributing to a culture that is increasingly intolerant and lacking in empathy.

New Urbanism, Integral Urbanism and definitions for Civic Space are employed to create an architecture with spatial principles that encourage urban interaction and promote healthy engagement with one's community thereby acting as a counterbalance to engagement on digital and visual platforms.

### KEY WORDS

Pretoria Station, Urban, Civic, Humanism, Place, Public, Pedestrian.

YEAR CO-ORDINATOR: Dr. Arthur Barker STUDY LEADER: Johan Swart

Submitted in fulfillment of part of the requirements of the degree MArch(prof) in the faculty Engineering, Built Environment and Information Technology at the University of Pretoria.

Thanks to God for protecting me from insanity, my parents who supported me throughout the year, to the lecturers who were patient and to all of the friends who gave input and time.

## Abstract

Social media, mainstream media and the predominance of visual engagement is contributing to a culture that is increasingly intolerant and lacking in empathy.

*“The hegemonic eye seeks domination over all fields of cultural production, and it seems to weaken our capacity for empathy, compassion and participation with the world.”*

*Juhani Pallasmaa*

Recent political events and dialogue surrounding issues of identity, politics and culture in the South African media are seen as a testament to this.

In response concepts of New Urbanism, Integral Urbanism and definitions for Civic Space are employed to create an architecture with spatial principles that encourage urban interaction and promote healthy engagement with one’s community thereby acting as a counterbalance to engagement on digital and visual platforms.

The Pretoria Station site is investigated as a platform where a wide spectrum of networks can converge, thereby maximising the potential for dialogue and exchange between cultures, races, classes and with the city and the state.

The proposed architectural design takes the form of a public space centred around the ‘Civic Knot’, itself a focal point of the folded landscape topology. The building is inclusive and seeks to balance urban requirements of daily needs, work and recreation by delivering a useful and fertile civic platform.





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# 1 INTRODU

# INTRODUCTION

INTRODUCTION  
PROBLEM STATEMENT  
AIMS  
DELIMITATIONS

# INTRODUCTION

In his book *The Eyes of the Skin*, Juhani Pallasmaa comments on the issue of a visually dominated society and its influence on architecture: *“The narcissistic eye views architecture solely as a means of self-expression, and as an intellectual-artistic game detached from essential mental and societal connections, whereas the nihilistic eye deliberately advances sensory and mental detachment and alienation”* (Pallasmaa 2005:22). Since the book was published this notion has become increasingly relevant with the proliferation of media and social media which relies primarily on visual communication regularly detached from context. This contextual detachment can be seen in the intolerant utterances by notable political figures like Donald Trump, Julius Malema, Geert Wilders and Marine Le Pen. Their comments contribute to the advancement of the mental detachment and alienation of which Pallasmaa speaks. These views, lacking in empathy, compassion and understanding, can grow into large scale violent movements such as the blatant displays of xenophobia and the escalation of the ‘Fees must fall’ movement.

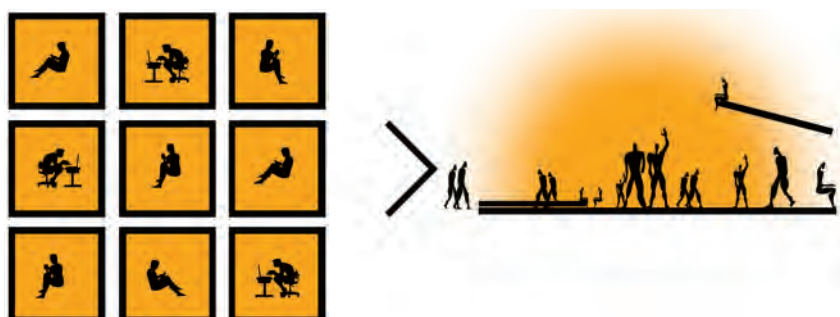
Ironically, while social media encourages social interaction, an emergent characteristic is that interaction with others can take place from a seemingly disconnected, misinformed and isolated world view. Thus the mental detachment and alienation symptomatic of today’s society, can largely be ascribed to social media. The documentary *The Internet Warriors* published in 2017 highlights the opinions of active internet ‘trolls’ across Europe who use social media to pronounce their ignorant and intolerant ideas clearly devoid of context and history. One interviewee after publicly commenting that Muslim countries should still be colonized since the western world is more civilized, later remarks that he would phrase it differently since *“I work with a Muslim, and he’s alright”* (Lien 2017). It is interesting to note that most of the people interviewed spend most of their time at home; their primary interaction with society is through a cellphone or a computer.

In 1764 Voltaire noted that a public space for cultural dialogue did exist: *“Enter into the Royal Exchange of London, a place more respectable than many courts, in which deputies from all nations assemble for the advantage of mankind. There the Jew, the Mahometan, and the Christian bargain with one another as if they were of the same religion, and bestow the name of infidel on bankrupts only... Was there in London but one religion, despotism might be apprehended; if two only, they would seek to cut each other’s throats; but as there are at least thirty, they live together in peace and happiness.”* (Online library of liberty. 2017).

This quote points to the Greek Agora which was a place of assembly where civilians gathered for announcements relating to their society, this space later became the marketplace of the city. The Romans adapted the agora and named it The Forum which means ‘the place outdoors’ women used the space to purchase items whilst the men gathered to discuss politics or the events of the day (Mark, 2009).

There is a difference between today’s culture and that of the Greeks and Romans, but surely there is merit in having a space where dialogue and argument is encouraged, a contemporary Agora?. Pretoria lacks places such as these, places that provide people with their daily needs and act as platforms for social engagement.

Figure 2. Isolated nature of digital media vs. open real nature of public urban space.



# PROBLEM STATEMENT

## General Issue

The year 2016 was turbulent for South Africa with various scandals contributing to the once indomitable ANC experiencing a dwindling support in the municipal elections. The EFF and its leader Julius Malema having shaken up parliament with bold and aggressive rhetoric has gained much of the support lost by the ANC. The 'Fees Must Fall' protests have marked a political reawakening of the South African youth, and deep questions about colonialism and neoliberalism have emerged. The lack of accountability and impunity enjoyed by the country's elite has seemingly made it acceptable for public protests to turn violent. Protests are often accompanied, as a matter of course, with the damage and destruction of private and public property. The apparent disinterest and inaction by government has also lead to protesters resorting to large scale disruptions of educational programs at the primary and tertiary levels that their voices may be heard.

Elsewhere, in the western world, the notorious Donald Trump has become president of the USA, Great Britain has removed itself from the European Union by referendum. ISIS pursues its goals of establishing an Islamic State - resulting in the migration of countless refugees. Tensions between Israel and Palestine remain unabated. Globally, segregation and intolerance has become commonplace.

Rather than breaking down prejudiced boundaries between people, social media has more often than not proven itself the catalyst of discord and disastrous purveyor of bigotry and intolerance. It must therefore be recognised that the realm of social media and popular media in general, has an important role to play in this regressive trend. It is appreciated that these digital platforms have a positive role to play in the contemporary social world but it must be conceded that they lack the contextual grounding required for a complete and holistic view about politics, culture and the environment.

With the end of apartheid, South Africa made history with Nelson Mandela and FW de Klerk overseeing a peaceful transition into democracy. A democracy upheld by an exemplary constitution, embodying a spirit of tolerance and equality. Statues of Nelson Mandela abound and streets are renamed in an attempt to commemorate the victory. Yet many of the urban public spaces have remained the same, appearing and functioning in the same way they did during apartheid.

## Urban Issue

When investigating the urban condition of Pretoria, one quickly notices the physical urban boundaries which segregate and repress. These were partly implemented during the apartheid era or were enhanced and accepted afterwards. Fortunately the improved distribution of wealth has resulted in a greater diversity of people gaining access to the city despite many physical boundaries still inhibiting its progress. These boundaries include: railway lines, wide roads and rivers all limiting access to neighboring areas and dividing the inner city into poorly integrated compartments of class and functions. If these areas could fragment into one another, the city could regain some of its natural order (Salingaros, 2003:7), as a result, a more dynamic, vibrant and humane city would arise.

Studies done by the Gauteng City-Region Observatory show that most citizens in the Gauteng area are not satisfied with the provision of quality public space. Failure to provide such spaces where people can interact face to face with their environment and their community may result in people having little choice but to turn increasingly to media and social media as their informant.

## Architectural Issue

After reading the work of Alan Lipman one quickly recognises the problematic state of architecture in Gauteng, he calls it ‘Speculator-Modern’. He argues that this second modern movement is characterised by aesthetic forms which are misinformed and torn from social content.

Projects that do attempt to address South African culture and identity tend to be idealistic or removed from contemporary realities. For example the empty Walter Sisulu Square or the highly securitised Freedom Park are so imbued with meaning and iconography that they become academic experiments with little value to the people on the ground who use and pass the sites daily.

As most truly public and civic urban environments, were built before the millennium, they have fallen from this stature in more recent times. Examples of such civic spaces are: Pretorius Square – 1887 (Henning & Engelbrecht, 2011), Church Square – 1905 (sahistory.co.za, 2017) and the Pretoria Station Gardens - 1947(Adde-uppe, 2012:10). One finds, on the one hand, that these sites have not been upgraded at all and do not allow for appropriation or the accommodation of diversity, richness and informality of the modern city centre. On the other hand, if the site has been upgraded, it has typically been upgraded in favour of vehicular considerations, further exasperating the sense of alienation experienced by the people who inhabit the city.

The social and political issues are seen as minor informants to the projects’ raison d’etre and as such its development and resolution will focus on the urban and practical requirements of the site and city. As Dewar and Uytenbogaardt note “*Rather it reflects a belief that urban areas have their own logic which derives from their very raison d’etre and from the needs of the people who live within them... Politics and ruling alignments will change but the human issues raised by urban growth will not.*”. They continue to say “*we believe it to be a vital role of urban planning to develop an urban manifesto which derives from a humanist, urban based logic and which is thus capable of transcending political ideologies and change, to guide the urban path of societal development.*” (Dewar & Uytenbogaardt. 1991:11). In this way, the proposal put forth by this dissertation intends to be lasting, and aspires to be timeless.

In 1764 Voltaire noted that a space for cultural dialogue did exist:

*“Enter into the Royal Exchange of London, a place more respectable than many courts, in which deputies from all nations assemble for the advantage of mankind. There the Jew, the Mahometan, and the Christian bargain with one another as if they were of the same religion, and bestow the name of infidel on bankrupts only... Was there in London but one religion, despotism might be apprehended; if two only, they would seek to cut each other’s throats; but as there are at least thirty, they live together in peace and happiness.”* (Online library of liberty. 2017).

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## Problem Statement

The uninhibited progress of the narcissistic and nihilistic eye; strengthened by digital media, political discourse and the nature of public and commercial space, is seen as contributing to detachment and ignorance. After Apartheid the country has made tremendous strides with regard to equity and human rights but the urban fabric and public space have remained mostly unchanged, here apartheid is still alive.

## AIMS

This dissertation proposes to find common ground between South Africa's diverse cultures and groups and to address the outdated public urban space in the Pretoria CBD area. An appropriate site will be found and a building proposed that would become a catalyst for urban renewal hosting the cultural diversity required for civic engagement as opposed to the alternative offered by digital platforms.

Site visits, photography and literature reviews will be used as a means of understanding the site. Once the site is understood in its historical, urban, cultural and social context, urban and architectural theory will be used as a means of unpacking and further investigation so that proposals can be generated. These theories will also be used to substantiate and strengthen the identified site as a location for cross cultural contact and urban identity.

The proposal should respond to current daily activities and future possibilities allowing for the site to become a center from which similar urban renewal projects can develop. The activities, movements and needs of the people who frequent the site on a daily basis will be the main generator for the form and functions of the building.

## DELIMITATIONS

The complexity and size of the site means that a focus area will have to be identified whilst relevant areas which have significant bearing on the proposal will have to be specified as future development.

# 2 CONTEX



KT

PRETORIA AND THE SOCIAL PARADIGM  
PRETORIA STATION SITE TODAY  
MAPPING  
SITE USERS  
SITE HISTORY

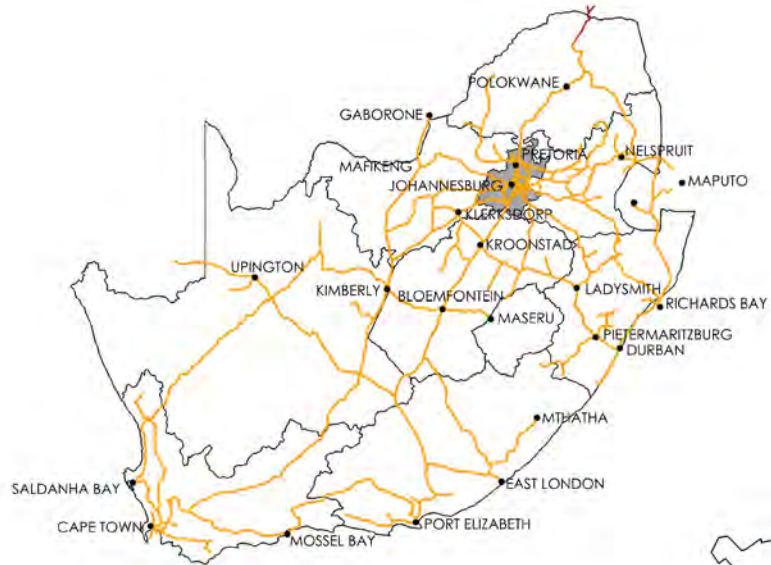




Figure 3. Zoom-in to the site location.

# PRETORIA AND THE SOCIAL PARADIGM

South African society is in serious danger of falling victim to the adverse effects of this visual and acontextual form of engagement the fallist movements: ‘Science must fall’, ‘Rhodes must fall’, ‘Zuma must fall’, ‘fees must fall’ and the xenophobic violence are clear cases in point. Although the movements are reactive rather than proactive, many of them begin with noble intentions. This was seen with the fees must fall movement which intended to highlight the dilemma faced by impoverished students and to bring attention to their plight when university fees were to be increased in October of 2015. The movements quickly became violent protests where property was damaged and lives were put in danger, their causes, demands and motivations no longer clear. The ‘fees must fall’ movement became a movement supporting free tertiary education, the realisation of which is highly improbable in a third world country such as South Africa where only 34% or 19 075 270 people (sars.gov.za) out of a population of 55.65million (statssa.gov.za) people pay tax. Rather than engage and propose viable alternatives to the current fee structures at universities, violence became the end in itself. The Higher Education minister Blade Nzimande estimated that the protests resulted in damage to property in excess of R600-million between its start in 2015 and September 2016 (Businessstech, 2016). The silence after the fee increases in 2017 could be seen as a testament to the convoluted reasons for the protests of 2015 and 2016. The ‘Rhodes must fall’ movement also decontextualised the role that Cecil John Rhodes played in the development of South Africa, whilst students ensured the removal of his statue from the very grounds that he gave to the university (uct.ac.za). The right to protest action must be protected but their acontextual propagation online, where people may not have any connection or understanding as to the reasons for the protest, should not become a norm.

The architectural field is going through the same process as Pallasmaa wrote: “The narcissistic eye views architecture solely as a means of self-expression, and as an intellectual-artistic game detached from essential mental and societal connections, whereas the nihilistic eye deliberately advances sensory and mental detachment and alienation” (Pallasmaa 2005:22). The Mall of Africa (see Figure 4) and Menlyn Maine (see Figure 5) projects are contemporary examples that appeal to both the narcissistic and nihilistic eye. They share a congruency with the types of social commentary found online and appear to be visual ‘utopias’ devoid of contextual and cultural meaning that attempts to remove the viewer and the visitor from reality (see Figure 6).

In his book *Architecture on my mind: critical readings in design*, Alan Lipman comments on the state of the second modern movement, calling it “architecture of defeat, of aesthetic form torn from social content, misinformed”. He identifies this movement with “rampant urban growth, unbridled speculative development; banks, office towers, finance houses... shopping malls. This is the new factory, a fine-tooled envelope around a stripped, cheap interior – packaged exploitation in a landscaped industrial park... This is Speculator-Modern, the architecture of the international market: inflated opulence for the few, pinched spaces, shoddy materials, botched work for the rest. It is a rotten architecture. But then, for most, it has been a pretty rotten society” (Lipman, 2003:XIV). Lipman laments the rise of shopping mall culture stating that they are ‘islands of consumption rising none too ethereally, downright clumsy, from shifting seas of parking lot fed by tentacles of interweaving roadway’. Lipman comments that these shopping malls are located in the civic cores of communities, that they have become the cathedrals of suburbia but that there exists very little or no intellectual discussion, debate or sense of





Figure 4. The sterile corridors of consumerism found in the Mall of Africa.

community (Lipman, 2003:23).

Disconcertingly the Mall of Africa completed in 2016 cost R5bn and added yet another 130 000m<sup>2</sup> of retail space to the suburban condition. According to SA property insider this brings South Africa to 23million m<sup>2</sup> of shopping centre space (with another 2million m<sup>2</sup> planned or in construction when the article was published) placing the country 7th globally - ahead of all continental European countries (SA property insider, 2016). While this ranking may be celebrated in certain circles, it is in stark contrast with the contextual and cultural realities in South Africa. The article continues to elaborate on the probability of increased economic pressure and the likelihood that many of these brand-new malls will fail, especially where they are built in close proximity to one another. These structures are alienating and exclude the majority of the country's population, the people who build, clean and service the buildings. It is an architecture for the elite and the spaces promote a new class apartheid. The magnitude of this classist system, and the income disparity therein can further be appreciated with recent surveys ranking South Africa as world's 2nd worst performer with income equality when using the GINI index (the top 20% of the population earn 17.9 times as much as the lowest 20%) (CIA.gov, 2017). The GINI index measures the distribution of family income of a country. The more nearly equal a country's income distribution, the lower its index, eg., a Scandinavian country with an index of 25. The more unequal a county's income distribution, the higher its GINI index, eg., a Sub-Saharan country with an index of 50. If income were distributed with perfect equality the index would be zero; if income were distributed with perfect inequality, the GINI index would be 100 (CIA.gov, 2017).

Presented with these two statistics, ranking 7th in the world for retail space, and ranking 2nd worst in the world with respect to the GINI coefficient, it can be seen that these modern "cathedrals" are not well contextualised.

Pretoria may be seen as the forerunner of this condition hosting 'Africa's Biggest Mall', Menlyn Shopping Mall which has 177 000m<sup>2</sup> of shopping floor area (Omarjee, 2016).

Social media, mainstream media and shopping mall culture dominate the platforms where social interaction takes place, the lack of alternatives is worrying.



Figure 5. Menlyn Maine, a display of western values and opulence in Pretoria, the capital city of South Africa. Here the narcissistic eye reigns supreme.



Figure 6. The explosion of media and access to political discourse often spewing information without context.

# PRETORIA STATION SITE TODAY

Figure 7 shows the Pretoria Station which is the chosen site for the dissertation. The site accommodates more than 160 000 people (commuters, visitors and residents) on any given week day serving as their gateway to the capital city (Pretoria news 2011). It is a bustling transportation hub that serves the entire city but unfortunately allocates prime public space to vehicles, resulting in a poor pedestrian and civic environment. In the US, similar sites are described in *Toward an Urban Manifesto* where Allan Jacobs and Donald Appleyard describe the condition of American cities as “one of closed, defended islands with blank and windowless facades surrounded by wastelands of parking lots and fast moving traffic... The public environment of many American cities has become an empty dessert, leaving public life dependent for its survival solely on formal occasions, mostly in protected internal locations” (Jacobs and Appleyard 1987:114).

The site contains the Pretoria Station, serving trains from the Metro Rail, Shosholoza Meyl, Blue Train and Gautrain. Additionally an inner city bus station and taxi stop can be found along Scheiding Street, as well as a national bus terminal and metered taxi area. Building functions and informal activities developed as need arose even though the architecture contributes little to the processes involved in these activities.

The potential of the Pretoria Station site to become a hub of interaction between people, the city and the state is immense. This opportunity arises from the diversity of people accommodated by the wide ranging forms of public transport that is concentrated in the area. It is a real space in the sense that it serves the city and its people, rather than people serving it as is seen in shopping malls. The central focus of the Pretoria Station can be people and the fact that they are human rather than their ideas, money, race or class.

The site is located at the southernmost end of Paul Kruger Street which connects it to Church Square in the city center. This street with its nodes form part of Pretoria’s central North South axis, in a sense the spine of the city connecting the brain (Pretoria Station) to the heart (Church Square). It is therefore surprising that there has not been one fully implemented vision for the site. Attempts of the like have been made but have only been partially completed. The overall result is a confusing, ill-defined and fragmented site with roads dividing it into isolated islands. The North-South axis is well defined due to the gardens in front of the station, ensuring that the visual lines and historic grid are left undisturbed. The other axis to the North West is important for commuters going to the Bosman street station and taxi rank as well as to the east connecting to the Gautrain station and the eastern suburbs. These are poorly defined and only daily users will know the route whilst visitors would be left in confusion.

The site is in need of a holistic intervention so that it may become a well-functioning, legible, cohesive and vibrant hub of the city. This holistic intervention should seek to enhance current public functions and remove private and isolated spaces from public levels. Furthermore, the intervention should move vehicular traffic away from a site which should be pedestrian focused.





Figure 7. The site today is beautiful, bustling and well maintained unfortunately its development has not been holistic or humanist (Author, 2017).

## SITE FUNCTIONS



Figure 8. Aerial perspective of site showing locations of functions.



Fig. 9.

**1. SEMI-PUBLIC VICTORIA HOTEL.** The foyer and restaurant on ground floor is accessible to the public with the rooms on first floor being completely private.



Fig. 10.

**2. SEMI-PRIVATE OFFICE BLOCKS.** The street edge is activated with retail functions whilst everything above the ground floor is reserved for private office use.



Fig. 11.

**3. SEMI-PRIVATE CLINIC AND NATIONAL BUS TICKETING OFFICE.** The clinic has a general practitioner, dentist, physiotherapist and gynecologist.





Fig. 12.

**4. PUBLIC FORMALISED INFORMAL MARKET.**

Traders are provided with lockers that are poorly maintained, the enclosed nature of the space means that it is poorly activated and therefore poorly used.



Fig. 13.

**5. PUBLIC LONG DISTANCE BUS WAITING AREA AND TICKETING OFFICES.**

This space is under-designed for the amount of people that use it especially on weekends, no accommodation is made for waiting or for luggage.



Fig. 14.

**6. PUBLIC BUS STOPS.** Poorly used possibly due to isolated location or poor signage.



Fig. 15.

**7. PUBLIC LONG DISTANCE BUS WAITING AREA AND ATMS.**

The surrounding road has contributed to the isolated and poorly used nature of the space. The location and porosity of the structure does not consider pedestrian flow or legibility of space in favour of vehicular traffic.

**8. SEMI-PRIVATE POLICE STATION.** Ideal location for a police station in a civic space although its design detracts from site legibility and cohesion.

**9. SEMI-PUBLIC SHOSHOLAZA MEYL OFFICES.** It is a poorly designed building with little consideration for public interface, it detracts from site legibility and cohesion.



Fig. 16.

**10. PRIVATE METRO RAIL OFFICES.** Public functions are lacking from the pedestrian level.



Fig. 17.

**11. PUBLIC SALVOKOP BRIDGE** is a 2m wide pedestrian bridge that crosses the railway lines to connect residences, businesses and Freedom Park to the Pretoria Station.

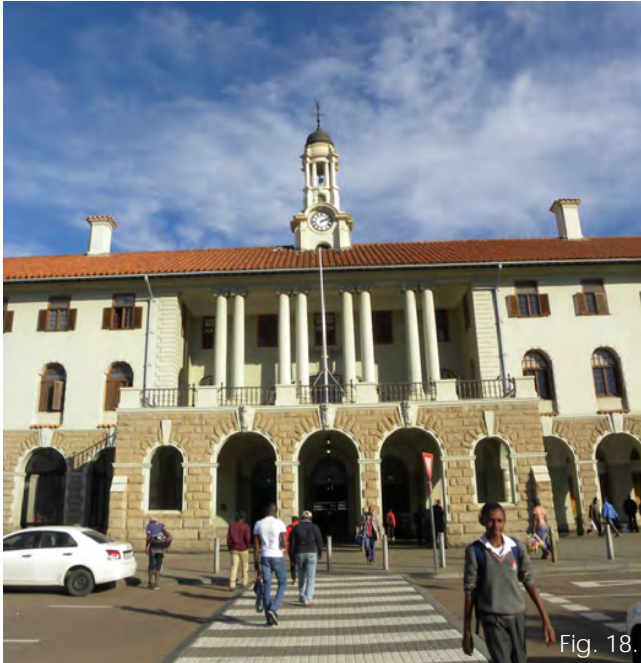


Fig. 18.

**12. PUBLIC PRETORIA RAILWAY STATION.** The building itself contains a myriad of functions including Metro rail offices on the first floor, shops, hairdressers, fast food restaurants and stalls on the ground floor. The platforms host all short distance and long distance trains that travel to Pretoria except for the Gautrain.



Fig. 19.

**13. PUBLIC GAUTRAIN RAILWAY STATION.**

**14. PUBLIC RESTURANTS**

**15. PUBLIC GAUTRAIN BUS STOP, PICK-UP AND DROP OFF POINT.**

**16. PRIVATE OFFICES FOR RENT.**



Fig. 20.

**17. PUBLIC FAST FOOD RESTAURANT.**



Fig. 21.

**18. PRIVATE PRIMARY AND HIGH SCHOOL.**



Fig. 22.

**19. SEMI PUBLIC BELGRAVE HOTEL.** Heritage building which has been gutted and modified so much that its value today is questionable.



Fig. 23.

**20. PRIVATE PRASA OFFICES** with its private parking are fenced in creating an inaccessible void within the highly public area. The aesthetic and age value of the building contributes to the palimpsest of the site.

**21. PRIVATE TUC-TUC SERVICES OFFICES.**



Fig. 24.

**22. PUBLIC STATION GARDENS** are well used during peak hours and provide sufficient seating and shading and for the transient commuters. Its layout emphasises the Paul Kruger Street axis to Church Square to the North creating a sight line through the entire city. The lack of defined and active edges to the East and West results in the transient quality of the space, it is not a destination or good public place.



Fig. 25.

**23. SEMI PUBLIC OFFICES. PUBLIC SPAZA SHOPS, HAIR SALONS, LAUNDRETTES AND FAST FOOD OUTLETS** activate the street edge with offices above and behind.



# MAPPING

## WALKING DISTANCES FROM PTA STATION

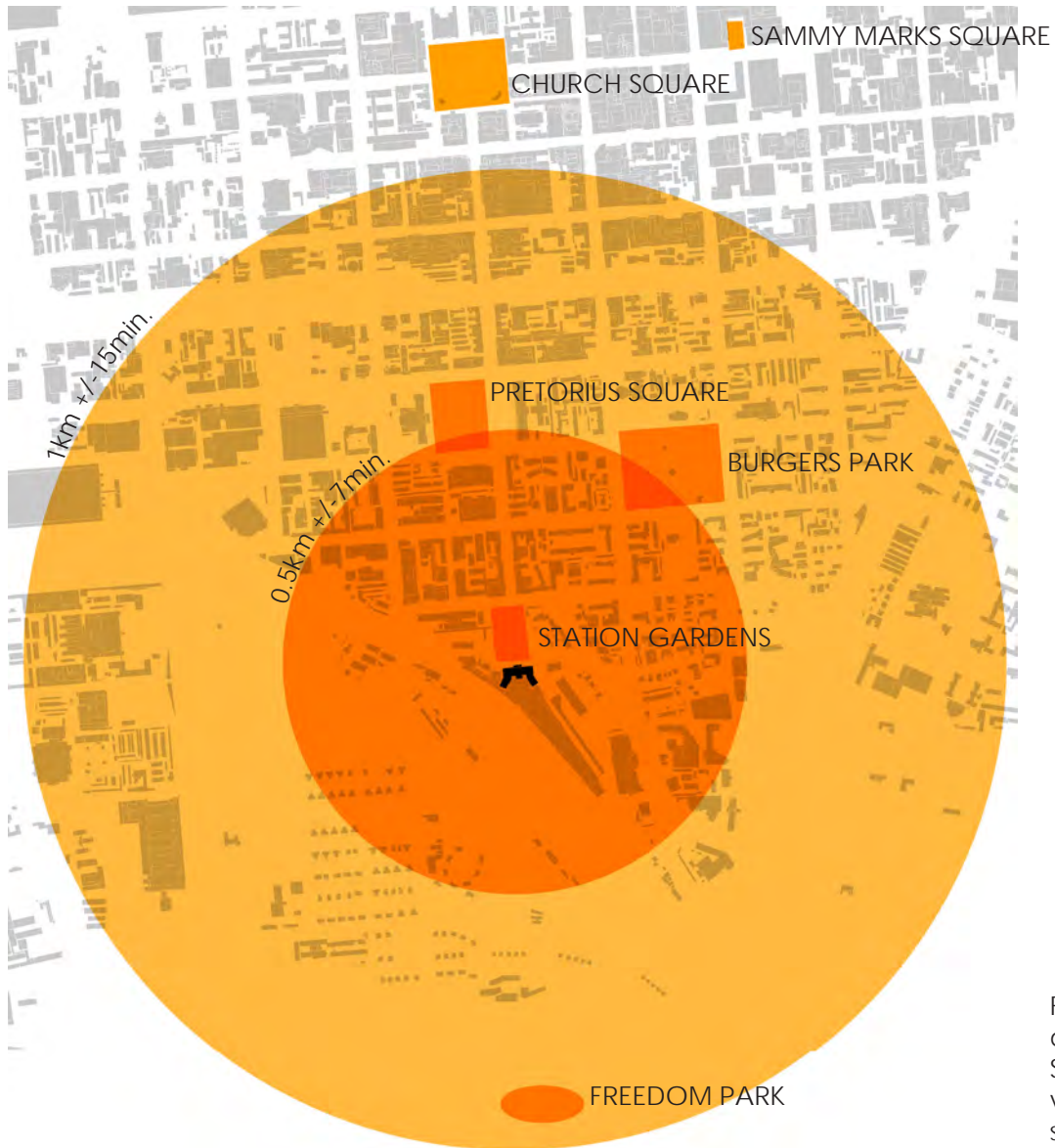
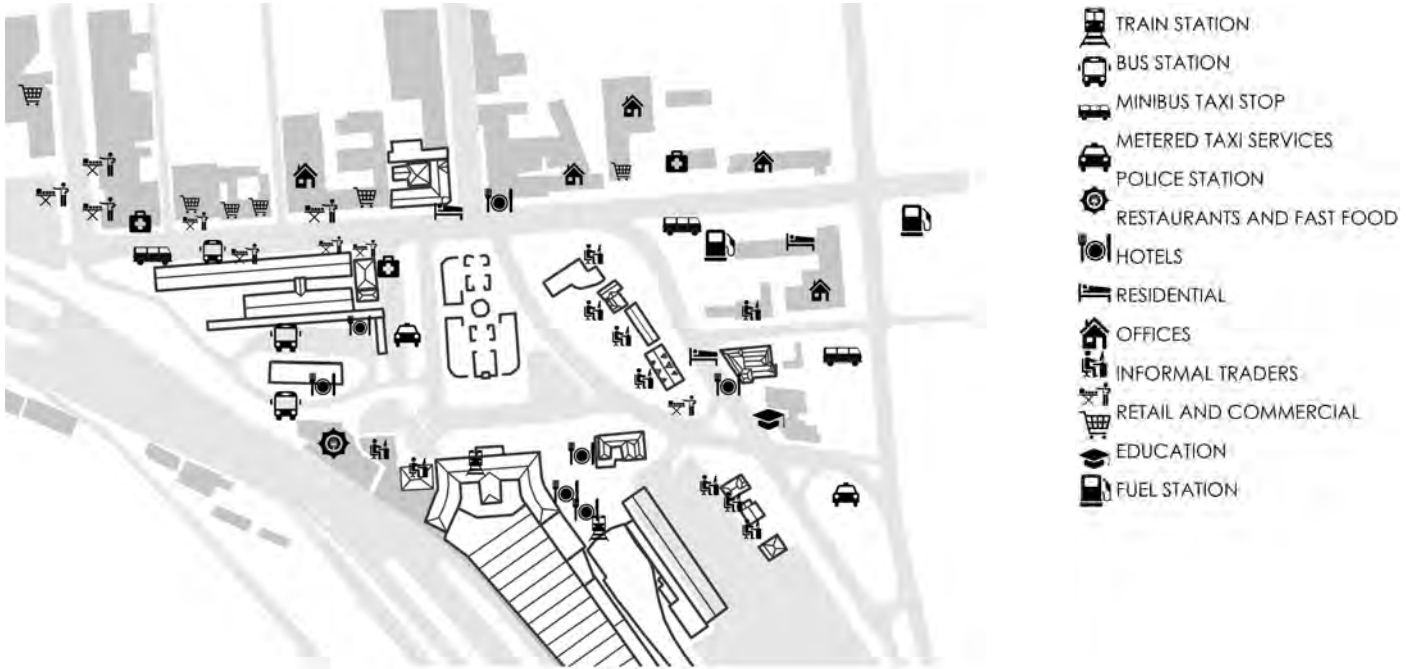


Figure 26. Here walking distances from Pretoria Station Gardens to various civic and public spaces are mapped. Note that these distances are measured as the crow flies, so reaching freedom park will take longer than 15 minutes.

## SITE ACTIVITIES



Mapping of existing activities on site shows its excellent mixed use nature, it almost exists as a city centre in itself. Unfortunately the spatial arrangement is perceived as chaotic and design focuses on vehicular flow rather than that of the pedestrians. The contribution that architecture could make to the site is immense. If activities are rearranged in such a way that they guide visitors and commuters to prominent nodes nearby it would enforce the experience of the Station being an integral part of the city and city life.

Figure 27. Map of the Station Site with activities.

## TRANSPORTATION NETWORKS

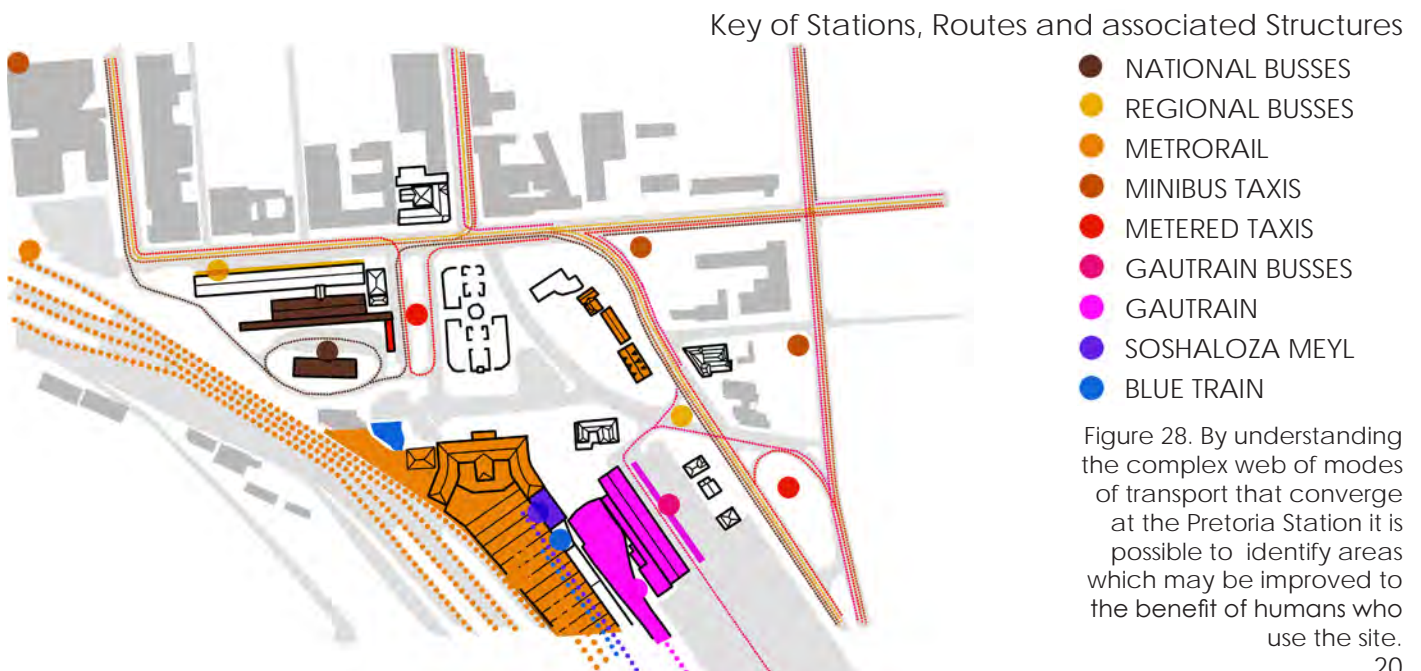


Figure 28. By understanding the complex web of modes of transport that converge at the Pretoria Station it is possible to identify areas which may be improved to the benefit of humans who use the site.

## PUBLIC BUS NETWORK



Figure 29. Pretoria has an extensive public transport system, especially the Tshwane Bus Services which connects the city with low fares. The Putco, Gautrain and Areyeng buses function independently, the lack of integration between the various services leads to superfluity. The Gautrain blatantly caters to the upper middle class population with many more stops connecting the wealthier suburban East to their stations. Whilst the Areyeng services is based on a New Urbanist concept of Bus Rapid Transit which attempts to address the issues of increasing vehicular traffic and associated pollution by providing a cost effective alternative to using private cars. Putco is a private commuter bus company with buses that travel larger distances to peripheral neighborhoods.



## CONNECTED INFRASTRUCTURAL NETWORK

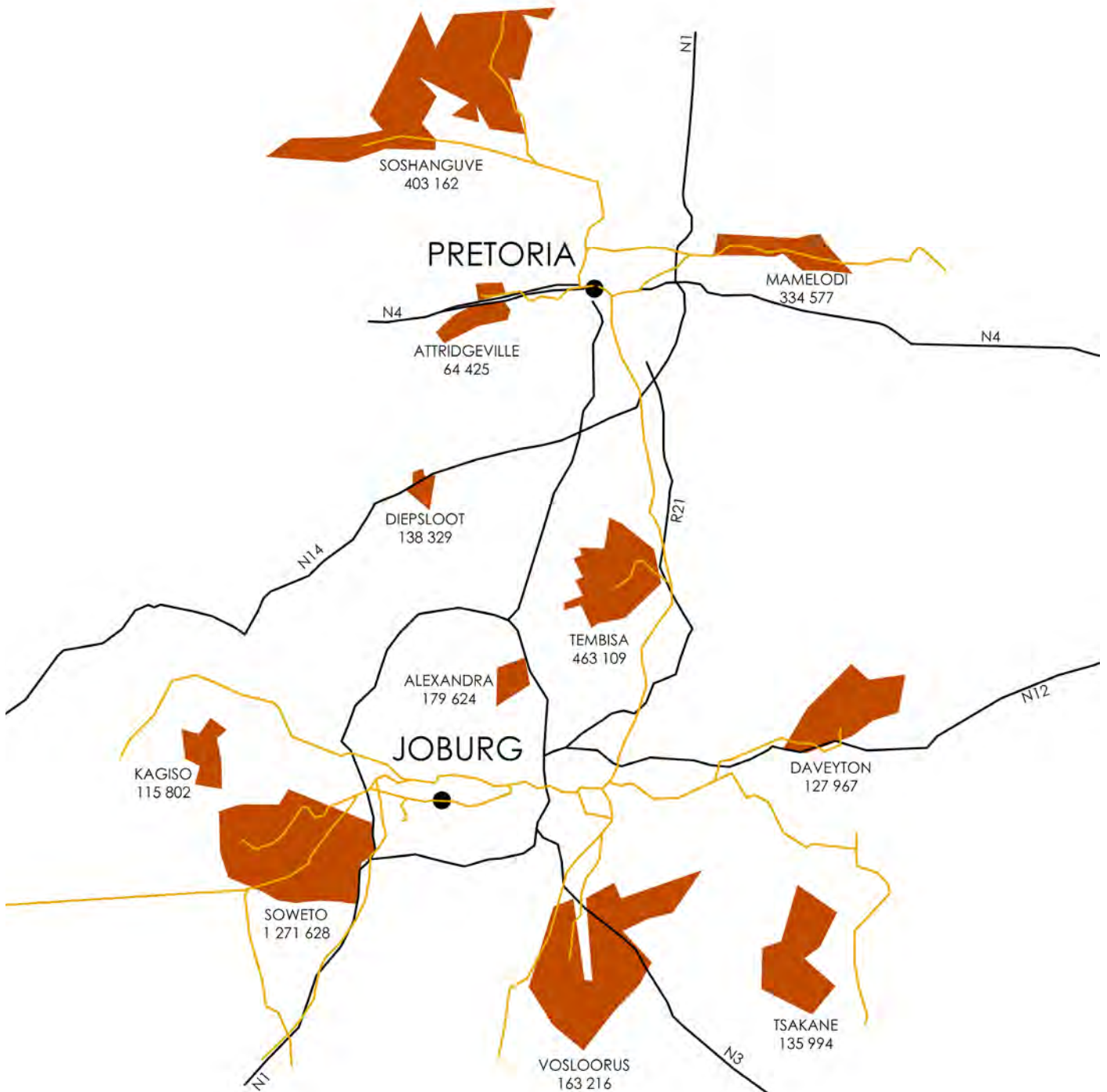


Figure 30. Diagrammatic map of Gauteng Metro Rail and highway networks connecting distant townships to the city centers. The urban centers provides opportunities to many of the township dwellers who rely on rail to get into the city and minibus taxis to get around in the city area. Thus the rail and road networks play an important role in enabling interaction between rural communities and those that are urban. At the heart of this network lies the Pretoria Station and the Johannesburg Station.

# SITE USERS

**Commuters:** Make up the majority of users on the site they are also the residents, tourists, visitors and businesspeople shown in figures 21 - 38, who will be discussed in more detail below. The commuters are mostly people who are in a hurry and require services such as fast food, grocery outlets or cafés, these are mostly catered for although not in any coherent or convenient manner.

**Residents:** The area surrounding the station has a low density of residential buildings. Nearby residents are those residing in Salvokop across the railway line or towards Berea Park to the East. The site itself does not provide adequate recreation, retail or restaurant amenities and subsequently residents only use the site transitionally.

**Tourists and Visitors:** The movement patterns of tourists and visitors mainly centre around the Gautrain station, national bus terminal and occasionally the Blue train in the Pretoria Station. There is a small information desk inside the Pretoria station which under caters to international visitors (eg. pamphlets or brochures providing information about Pretoria are not available). There is no comfortable or legible route to Freedom Park and the wide busy streets that need to be crossed to get to the city centre make the walk unappealing.

**Businesspeople:** These users only transition across the site, to and from work with few activities or services that could potentially cater to their needs, such as a comfortable space where lunch could be eaten or where clients could be met.

**Entrepreneurs and Traders:** Informal traders mostly gather along Scheiding Street. The old workshops were converted into a formalised 'informal market' but this is shunned by traders as the enclosed nature of the space makes it unsafe and unsanitary thereby pushing the traders onto the sidewalk and to the national bus terminal where long distance travelers tend to have longer waiting periods.







Fig. 33.

Photos displaying the colourful diversity of people who use the site. The friendliness and positive attitudes of users contrast with the neglected aggressive landscape that they find themselves in. It must be recognised that appropriation is the major contributing factor to the richness of the site. Figures 31-38. (Author, 2017).



Fig. 34.



Fig. 35.



Fig. 36.



Fig. 37.



Fig. 38.

# SITE HISTORY

## Humble Beginnings

In 1892 the Nederlandsche Zuid-Afrikaansche Spoorweg-Maatschappij (NZASM) built five separate single story masonry buildings that ran along the railway lines in an otherwise bare and dusty landscape. The buildings housed a parcels office, service building, ladies waiting room, general waiting room and a refreshment room (Ad-Uppe 2002:12). The first train arrived at the Pretoria Station in 1893 and was to serve the thousands prospectors and entrepreneurs that would flock to the area after the discovery of gold in the Witwatersrand and later connecting Pretoria to Durban and Delagoa Bay (Maputo) so that the Transvaal would no longer be dependent on British controlled ports (le Roux 1993:27). The buildings were used as the main station for Pretoria until the Herbert Baker station was opened in 1912 and the original buildings were demolished soon afterwards (Ad-Uppe, 2002:12). Some NZASM buildings remain on site today including the Old NZASM Pakhuis built in 1896 which was used as a depot for printed materials and the signals and telegraph office building built in 1898. In 1900 NZASM handed operations over to the Imperial Military Railways who handed it over to the Central South African Railways (CSAR) after the Anglo Boer War in 1902 (Adde-Uppe, 2002:13).

Figure 39. Photo of the Pretoria Station during the early 1900s showing the single story masonry buildings which welcomed visitors from the Cape and Natal (Pretoria Archives, 1904).

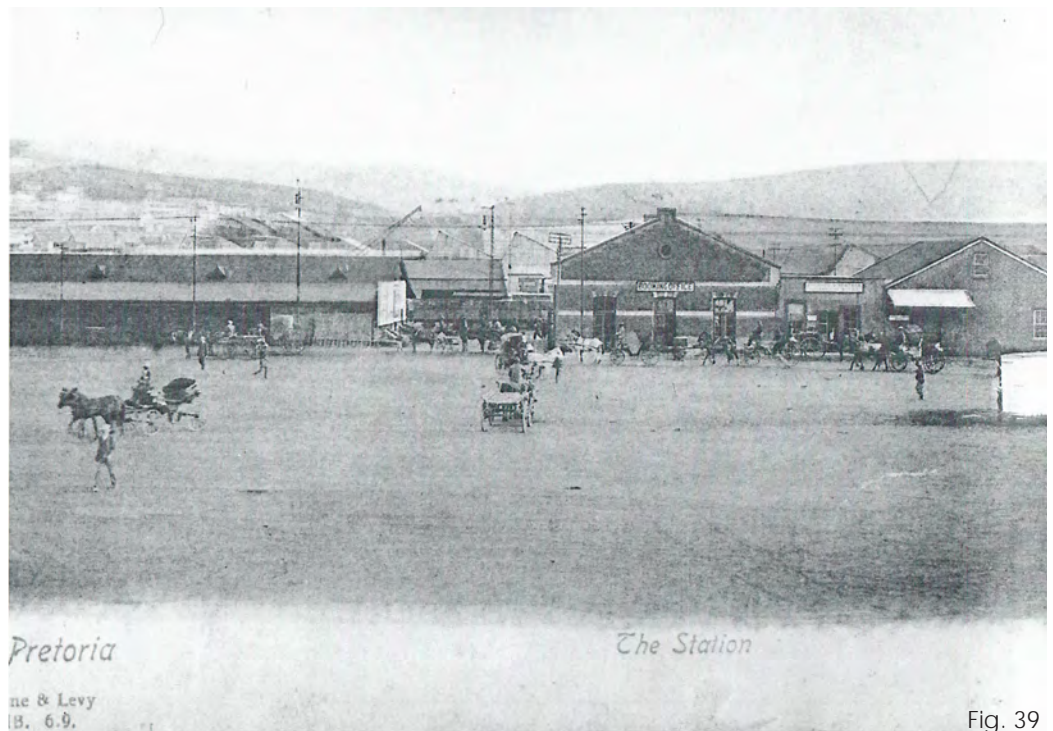


Fig. 39



### The Station Building

The Pretoria Station was completed in 1910 after a competition for its design. Sir Herbert Baker had to become an arbitrator for the competition to design a new station building in 1908 after the assessors failed to reach a unanimous decision. Baker was not impressed with any of the entries and volunteered himself as the best qualified to design the building which he began on 17 March 1909 and submitted drawings on the 11th of August (Ad-Uppe, 2002:6). The Station building is seen as a practice run for the Union Buildings which Baker later designed. Aesthetically the building has Palladian classicism period influences (le Roux, 1993:27). The station was reserved for whites only between 1959 and the mid-eighties whilst non-whites were relegated to use the Bosman Station which was built as part of a project connecting Pretoria to Saulsville between 1955 and 1959 (Adde-Uppe, 2002:19).



Figure 40. Photo of Pretoria Station around 1910, when trams still connected it to Church Square (nationalarchives, 2016).

Fig. 40.

DEVELOPMENT OF THE SITE 1900-2017

1900

1920s

1947

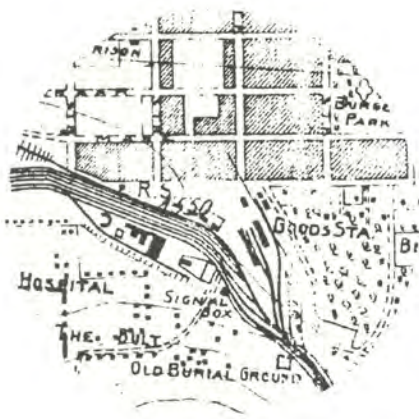
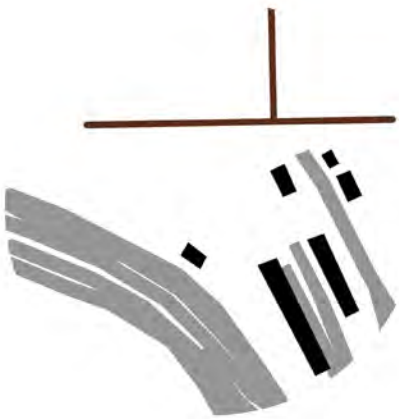
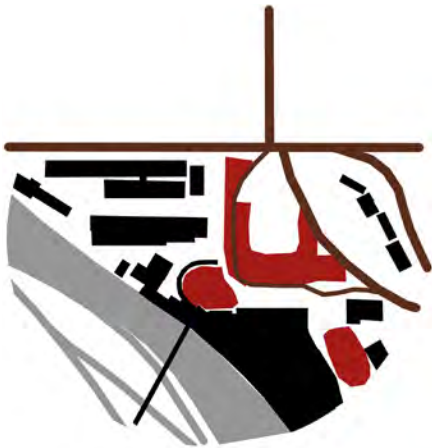


Figure 41. Aerial photographs and diagrams of the site indicating the development from 1900 to 2017.

2001



2009



2017



- BUILDINGS
- PUBLIC ROADS
- PARKING
- ACCESS CONTROLLED ROADS
- RAILWAY LINES



### The Station Square

Sir Herbert Baker saw the square in front of the station as an integral part of the mile long axis connecting the station to Church Square. The Paul Kruger statue, funded by Sammy Marks, designed by Anton van Wouw and cast in Italy, was placed on the site between 1925 and 1954 before it was moved to Church Square (Adde-Uppe, 2002:16). The garden that still exists today was laid out in 1947 around the Paul Kruger statue in preparation for a visit from the royal family that same year.

In the monthly journal released by the Department of Public Works of South Africa it is noted that “*Frequently the station serves as a standard for measuring the attractiveness of a country and the customs of its people.*” (Department of Public Works, 1948).



Figure 42. The original garden layout around the Paul Kruger Statue, with ponds and water plants (Gibbs, 1948).

Fig. 42.

### Recent past to present:

The Herbert Baker Station building has survived two catastrophes; in November 1949 it was damaged by a freak hailstorm with hailstones half the size of bricks. It caused severe damage to cars and vegetation and to the roofs of buildings in Pretoria with much of the Station roof tiles destroyed (Adde-Uppe, 2002:18). Since this date very few improvements were made to the station as management was frequently changing hands from the South African Railways and Harbours to the South African Transport Services to Transnet and the South African Rail and Commuter Corporation (SARCC) which were established in 1992. The management was then handed over to Intersite Property Management Services, a subsidiary of the SARCC (Adde-Uppe, 2002:20).

In February 2001 delays on the unreliable metro rail commuter trains caused aggrieved passengers to resort to arson to get their message across. The Herbert Baker station building was badly damaged by the fire which gutted the ground floor and completely destroyed the roof. Baker designed a concrete slab under the roof trusses which protected the first and second floor and saved the building from being completely destroyed, nevertheless damages were estimated to the value of R20-million. The restoration process was intensive as the heritage value of the building had to be respected, appropriate materials had to be sourced and time was against the project team as the station needed to be up and running as soon as possible (Adde-Uppe 2002:28). Ironically the violent tactic had the intended effect as the building received major upgrades for the first time in 52 years and the train schedule was improved.

Figure 43. The Burnt out shell of the Station Building, where fortunately only the ground floor and roof levels were completely destroyed. This resulted in upgrades and maintenance that was long overdue (Intersite: 2001).



Fig. 43.



Fig. 44.

Figure 44. Photo of the Shosholoza Meyl Offices and walled off parking is located at the heart of a pedestrian and public space.



Fig. 45.

Figure 45. The Shosholoza Meyl Offices and reception building's colour and height responds to the Baker Station but its position contributes to the fracturing of the site.



Fig. 46.

The station was officially reopened on the 24th of June 2002, the restoration and reparation process lasting an impressively short 16 months (Adde-Uppe 2002:34). Unfortunately the fast tracked process of replacing the destroyed Mainline Passenger Services Centre resulted in the poorly considered Shosholoza Meyl building. It has a poor aesthetic relation to the adjacent station building and together with the 2008 addition of the national bus terminal and police station, they contribute to the continued fracturing effects caused by urban planning interventions (Simone, 2004: iv). These types of interventions have a knock-on effect on the community who begin to develop economies centred around: *“repair, the illicit or unconventional use of built and institutional environments and piracy driven by specific amalgamations of technology that enable these economies.”* (Simone, 2004:2). These interventions do promote and often require appropriation and creative innovation for these spaces to function in such a way that benefits the community. This innovation displayed by the individual must be commended, but it could be put to much better use if the environment encouraged innovation which improved and strengthened the community rather than merely allowing it to function.

The old PX Shed or Goods Sheds were converted into a luxury coach terminus which was short lived. Since then only partly realised and isolated ‘improvements’ have been made to the site including the national bus terminal in 2008 and the Gautrain station in 2010. Unfortunately the awkward angle with which the railway line intersects the urban grid has resulted in the construction of separate insular buildings that do not allow for future expansion or re-appropriation; a holistic response would certainly have avoided this development.

Figure 46. The spaces left over after planning are creatively allocated to vehicle parking spaces.

## BUILDINGS WITH HERITAGE VALUE

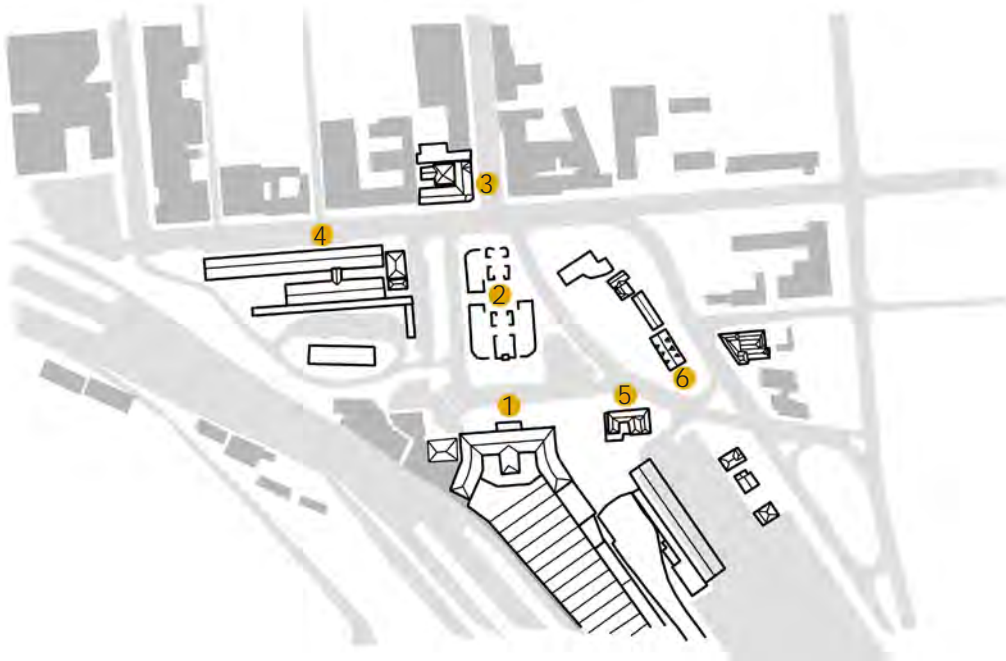


Fig. 47.

**1. PRETORIA STATION BUILDING** was built in 1910 after a competition for its design. Sir Herbert Baker (assessor of the competition) decided that he himself was best qualified to design the building which he used as a practice run for the Union Buildings. Aesthetically the building has Pre-Edwardian period influences. The Building has aesthetic, architectural, historic and cultural value and significance for past, present and future generations.



Fig. 48.

**2. STATION GARDENS**, were completed 1947 in an Italian style in preparation for a visit from King George VI. The Paul Kruger Statue was moved here from Prinses Park in 1925 and was later joined by the four boers. Interestingly the statue was moved to church square in 1947. The Gardens are well used by commuters during peak hours in the mornings and afternoons. The Gardens have aesthetic, historic and cultural value and significance for past, present and future generations.





Fig. 49.

**3. VICTORIA HOTEL** designed by Jacob Joff e and completed in 1884, it is known as the oldest hotel in Pretoria. Demand for accommodation rose as Dutch were arriving in Pretoria to work for NZASM. In 1901 the building was renamed to the Victoria Hotel to appeal to the British who occupied Pretoria. The Building has aesthetic, historic and cultural value and has significance for past, present and future generations.



Fig. 50.

**4. GOODS SHEDS**, built October 1894 it served as workshops and sheds, here steam powered machinery was used to repair and service 200 locomotives, 80 carriages and 1400 wagons. The southern structures were demolished in the 1960s since most of the functions were transferred to new Koedoespoort workshops. The Building has historic and technological value due to the important role it played in the development of rail in Pretoria.



Fig. 51.

**5. SAR BUILDING** was the old audit building completed in 1928. The Building had Historic (age), architectural and aesthetic value, it contributes to the palimpsest of the site.



Fig. 52.

**6. NZASM PAKHUIS (STORE)** 1896 originally used as the store for administration of the increasing passenger traffic. In 1969 the building would have been demolished due to its poor condition but the SAR restored the building due to appeals by the Simon van der Stel Foundation. The Building has historic (age), architectural and aesthetic value and contributes to the palimpsest of the site.



Fig. 53.

**PAUL KRUGER STREET**, Formerly Market Street until 1938, connects the station with Church Square in the city centre. The Street has historic, cultural and social value and significance for past present and future generations.



Fig. 54.

**SCHEIDING STREET** originally the southernmost street of Pretoria separating the city from farmland to the South. The Street has historic value as the dividing street between old Pretoria and the farmlands to the south.

# 3 THEORY

THEORETICAL PREMISE  
NEW URBANISM  
INVESTIGATION OF PUBLIC URBAN SPACES IN PRETORIA  
CIVIC SPACE  
ARCHITECTURAL THEORY  
SUSTAINABILITY  
CONCLUSION

# THEORETICAL PREMISE

As was discussed in the previous chapter, there is a shortage of contextual public architecture in South Africa which are inclusive of diverse groups of people and grounded in the realities of their needs and requirements. Public architecture in the urban condition is able to give back to society rather than alienate people from it as the ‘Speculator-modern’ malls and neighborhoods described by Lipman; the architecture that Pallasmaa describes as appealing to the ‘Narcissistic eye’ or the ‘Nihilistic eye’ and the wastelands described by Jacobs and Appleyard achieves. Public Civic spaces could become a veritable counterbalance to these trends promoted by social media and the ‘Speculator-modern’ or ‘architecture of defeat’ described by Alan Lipman. This is not a new concept as urban theorists such as Jane Jacobs commented on these developments as early as 1961. *In Death and life of great American cities*, Jacobs emphasizes the value of streets, sidewalks and parks and their role as sites of human activity and places of visceral social interaction. Later, in 1977, Christopher Alexander wrote *A Pattern Language* which highlights the value of patterns rather than ‘complete designs’ which provide designers with a usable but not predetermined series of relationships between activities and spaces (Cormana 2010:7).

In South Africa there is also a call for a concerted effort to address “*the pattern of low density, haphazard and discontinuous development*” by managing urban growth in a ‘*deliberate manner*’. Cape Town has begun to address these issues with their *Urban Edge Policy* which was implemented in 2001. The densification of urban areas is also seen environments that promote a more ‘*efficient, safe, equitable and accessible urban structure through containing and intensifying urban development*’. In South Africa some New Urbanist principles have already been implemented including the Bus Rapid Transit systems in Cape Town, Johannesburg and Pretoria. In the article entitled *Brave New Urbanism*, Dr Hugo van Zyl an environmental resource economist, comments: “*New Urbanism, by creating better places, by making spaces on a human scale, based around pedestrians rather than parking lots, actually raises the quality of life while lessening energy expenditures.*” (Van der Leek, 2011). The article mentions successful examples of New Urbanism in South Africa such as the Cape Quarter (fig. 55) and the V&A Waterfront (fig. 56) in Cape Town and Melrose Arch (fig. 57) in Johannesburg. Whilst these (and more recently Menlyn Maine) examples do employ New Urbanist principles of sustainability, densification, mixed use and walkability, they tend to gentrify areas and cater to a certain elite who often use private vehicles to get to these ‘islands’ anyway. These are glorified malls, the world of the ‘narcissistic eye’ and the ‘nihilistic eye’ that appeals to the wealthy, New Urbanism in South Africa is yet to become humanist so that it may benefit the marginalised and the poor.



Figure 55. The Cape Quarter Cape Town.



Figure 56. The V&A Waterfront Cape Town.



Figure 57. Melrose Arch Johannesburg.

Fortunately the municipalities of Johannesburg and Cape Town have in more recent times developed more inclusive humanist New Urbanist strategies such as Johannesburg’s Corridors of Freedom and Cape Town’s Transit Orientated Development (TOD) amongst others.



# NEW URBANISM



Figure 58. Urban Design as a Visual Tradition



Figure 59. Urban Design as a Visual Tradition



Figure 60. Urban Design as a relationship between activities and spaces.

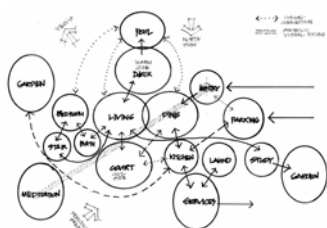


Figure 61. Urban Design as cross-connections between activities and spaces.

In order to understand the value of healthy urban space New Urbanism will be investigated as a possible means to achieve these goals. Then more particularly the role that Civic Space plays in an urban society after which the development of South African architecture will be investigated so that the final design will be contextual in the social, urban and architectural realms.

In the book *Public Places - Urban Spaces*, Mathew Carmona outlines the development of New Urbanism. Within the urban design field there have been two broad traditions of thought, the one deals with appreciating the design and products of urban design as aesthetic objects or displays the other as environments. New urbanism stems from the third tradition which combined the original two into a ‘making places’ tradition which focuses on the process as well as the product. The aim of the development of urban design is the quest to create a “*more human-centred environment - one not only delivering quality of life locally, but also mitigating against unwanted consequences globally.*” (Cormana. 2010:8).

1. **The visual Artistic Tradition** is the narrower and earlier understanding of urban design focused on the visual qualities and experience of urban space. This approach neglected to reflect on the cultural, social, economic, political and spacial factors and processes which contribute to the success of urban places, Le Corbusier is regarded as a key proponent of this tradition. A strand of thought which was prominent in this tradition was Gordon Cullen and other’s notion of a ‘*townscape*’ which appears to “*emphasise the visual dimension to the virtual exclusion of all others*” (Cormana. 2010:6).

2. **The Social Usage Tradition** reacted against the first tradition and is focused on the way in which people use space and with ideas of perception and sense-of place. Kevin Lynch is regarded as a key proponent of this tradition, he highlighted the importance of pleasure in urban spaces as commonplace experiences rather than elitist and exclusive concerns (Cormana. 2010:7). Jane Jacobs is seen as another key proponent, she “*attacked many of the fundamental concepts of ‘modernist’ urban planning, heralding many aspects of contemporary urban design*” in her book *The Death and Life of Great American Cities* (Cormana. 2010:7). She fought against the idea of a city as a work of art which is made from a ‘selection of life’ in favor of a city as “*...life at its most vital, complex and intense.*” (Cormana. 2010:7).

The work of Christopher Alexander also fits within this tradition, in his work *Notes on the Synthesis of Form* (1964) and *A City is Not a Tree* (1965), he identified the failing of urban designs which considered ‘form without context’ and those that ignore the “*rich diversity of cross-connections between activities and places*”. Since then Alexander wrote two more books: *A Pattern Language* (Alexander et al 1977) and *The Timeless Way of Building* (Alexander et al. 1979), where he uses patterns instead of complete designs which become the basic essential framework that could be shaped and refined. Thus designers are provided with a series of relationships between activities and spaces that were not deterministic. (Cormana. 2010:7).

3. **The Place Making Tradition (New Urbanism)** is the emergent tradition which synthesises the two earlier traditions. This tradition is simultaneously concerned with urban places as physical and aesthetic (hard city) as well as behavioural settings (soft city). Sustainable urbanism has been the latest development within this tradition and may possibly develop into its own new tradition in the near future. This movement shares many similarities with the social usage tradition with the addition of urban form as potential sites where the human carbon footprint may be reduced (Cormana. 2010:8).

A more recent contribution to this Tradition has been the work of Nan Ellin who developed the concept of Integral Urbanism. It supports the notion that “*nothing exists in isolation, only in relation*”. Integral Urbanism emphasises connection, communication and celebration as opposed to the master planned functionally zoned city which isolates, separates and retreats (Ellin 2006: XV). In a lecture at the Texas A&M College of Architecture in March 2016, Ellin says that integral urbanism intends to activate places with the creation of thresholds as places

of intensity which draws a range of people and activities. They provide places for congregation along synergies and efficiencies where people can envision and implement desired change. These thresholds become spaces where people are encouraged to be proactive rather than reactive (Ellin 2016). She contrasts the modern paradigm which “discourages convergencies through its emphasis on separation and control, this new paradigm encourages them. Convergencies in space and time of people, activities and business generate new hybrids. These hybrids allow new convergencies and the process continues. This is, in fact the definition of development”. To achieve these goals Ellin has like most urban designers and theoreticians identified qualities that define a healthy urban space namely: Hybridity (and connectivity), Authenticity, Porosity and Vulnerability.

Snohetta has been one of the forerunners in implementing New Urbanism as they have done in Times Square in New York (See figure 62). In this project the designers doubled pedestrian space by taking away from vehicular space. “The design of the new plazas empowers people to move in a natural, comfortable way through Manhattan’s core.”

Here the humanism of urban life is celebrated “...the new plaza on Broadway has reinvented Times Square as a contemporary stage for the spectacle of public life, reviving its place at the heart of New York City.”



Figure 62: Plans and photos of Times Square before and after the renovation showing the pedestrianisation and closure of 47th Street (Snohetta, 2017).

In South Africa the City of Cape Town (CoCT) is in the process of upgrading the CBD and surrounding area by implementing new urbanism principles. On 11 July 2017 the CoCT published the *Cape Town Municipal Spatial Development Framework (MSDF) 2017-2022*.

*“The City is intent on building a more inclusive, integrated and vibrant city that addresses the legacies of apartheid, rectifies existing imbalances in the distribution of different types of residential development, and avoids the creation of new structural imbalances in the delivery of services. Key to achieving this spatial transformation is transit-oriented development (TOD) and associated densification and diversification of land uses.”* (See Figure 63-64).

The CoCT notes that the urban issues need to be addressed with a proactive and innovative approach so that the city can be restructured so that equal opportunities to housing, transit, recreation and work (City of Cape Town, 2017:2-3).





Figure 63. Transport accessible precincts based on Integrated Public Transport Networks 2032 (CoCT, 2017).

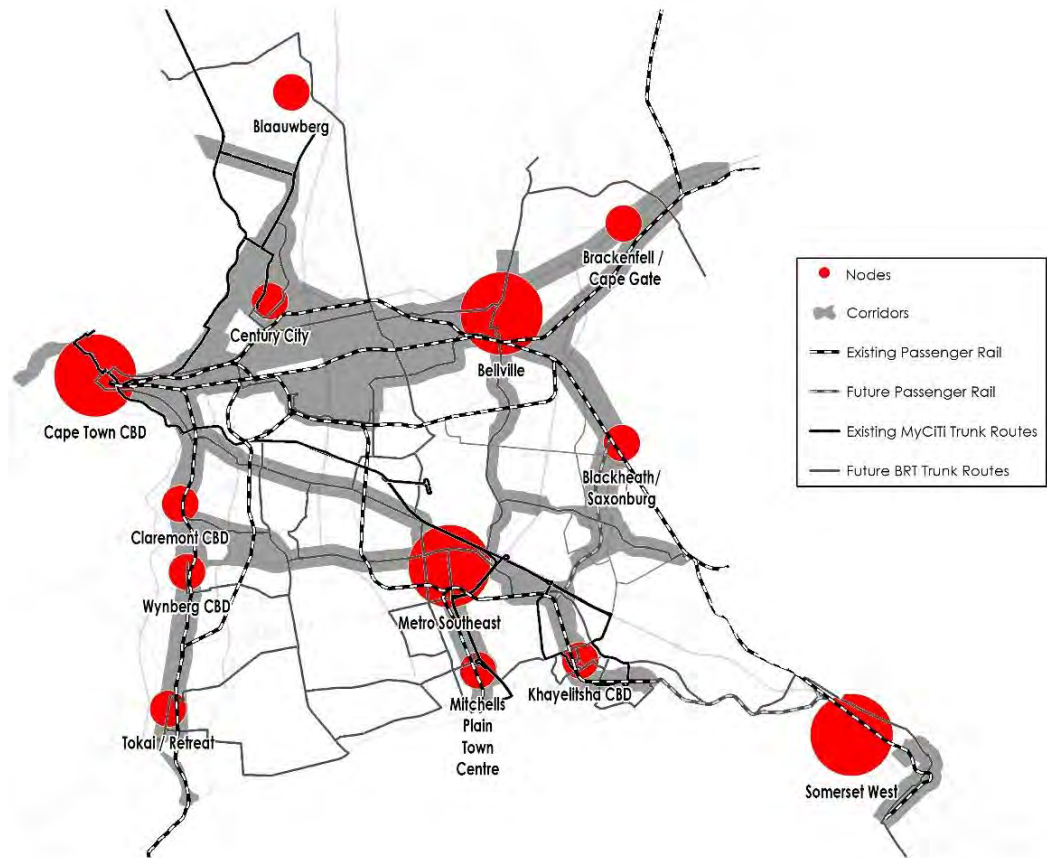


Figure 64. Conceptual development corridors and urban nodes. (CoCT, 2017.)

The City of Johannesburg has developed the Corridors of Freedom spatial plans which is another Transport-Orientated Development (TOD). Here a future city is envisioned which contains well-planned transportation arteries connecting mixed use interchanges (City of Johannesburg, 2017). These mixed use nodes will focus on functions such as shopping, schooling, transport and recreation.

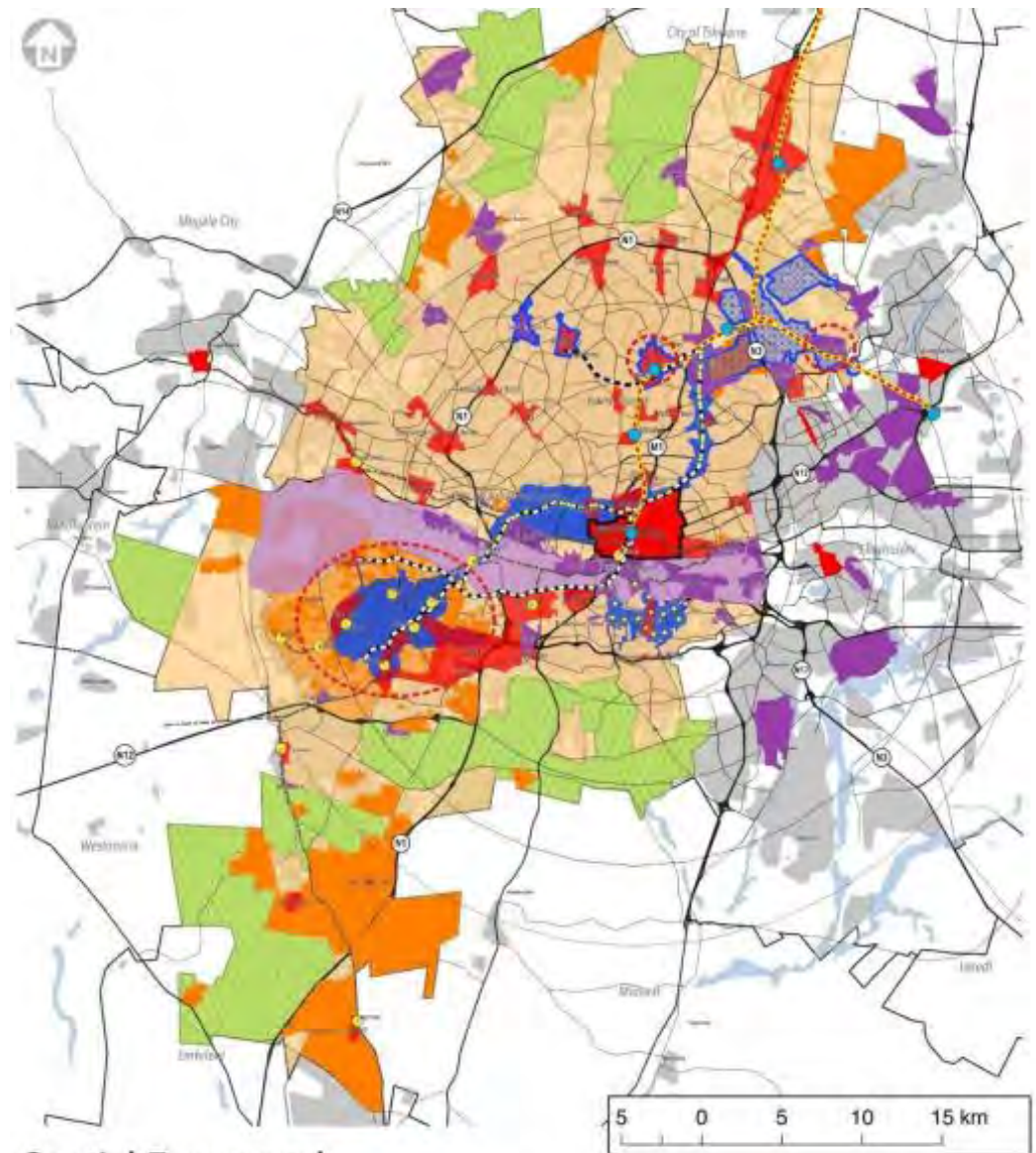


Figure 65. Corridors of Freedom spacial plan (CoJHB, 2017)

### Spatial Framework

#### INTEGRATED TRANSPORT NETWORK

- Railway Stations
- Gautrain Stations (Current Network)
- BRT Nodes
- TOD Precincts
- Gautrain Line (Current Network) copy
- Gautrain Line (Potential Future Link) copy
- Railway Lines
- BRT Backbone

#### ECONOMIC BACKBONE

- Principal Metropolitan Sub-centre
- Inner City (Metropolitan Core)
- Urban Nodal Areas
- Industrial Nodes
- Mining Belt (Mixed use Area)

#### PUBLIC TRANSPORT BACKBONE

- Empire Perth / Louis Botha CoF
- Turfloop CoF
- Soweto CoF
- Randburg - OR Tambo Corridor Elements

#### CONSOLIDATION ZONE

- Consolidation Zone
- Soweto
- Deprivation Areas

#### NATURAL STRUCTURE

- Wetlands and Waterbodies
- C-Plan Area Coverage
- Area beyond UDB
- Gauteng Built-up Areas
- CCJ Boundary



An excellent example of applied new urbanism is the Oslo Opera House designed by Snohetta in Norway and dubbed “*The Wave Wall*”, it was completed in 2007 (See figure 66-67). The building is described as a threshold between land and sea, between Norway and the world and between the public and art. Conceptually, the design deals with notions of togetherness, joint ownership, easy and open access for all (Archdaily.com, 2008).

*“The building is as much landscape as architecture and thus fosters public awareness and engagement with the arts.”* (Snohetta.com, 2008).

The design offers glimpses of performances and their production to the public and features public amenities such as cafes and a gift shop which also generate revenue for the institution. The South African context would demand a different approach to the walking surface finishes and landscaping as our bright sunlight would make an exposed white walking surface unbearable therefore a softscaping approach would be preferable. Programmatically an opera house would not contribute to urban life in Pretoria but foreseeably, something similar will fill this role in the near future. This project is useful as a precedent for its urban contribution through understated monumentality and public engagement through a folded landscape.



Figures 66 & 67. Oslo Opera House (Snohetta, 2007).

Another key element in New Urbanism is the notion of walkability which tie into the notions of safety, mixed use and connected neighbourhoods.

*“Although New Urbanism uses the same components as conventional developments, it is distinctive in one area, above all. New Urbanism is about creating walkable communities that are compact, vibrant, and mixed-use – meaning the same area can be used for living, working, shopping, entertainment and leisure.”* (Van Der Leek, 2011).

A healthy city is one which is walkable and that contributes to the urban identity and character. Jeff Speck is an urban planner who highlights the importance of walkable cities, reminding us that every journey in transit begins or ends with a walk. It is therefore important that the areas surrounding transit nodes like the Pretoria Station become walkable. By making a city walkable the planner, designer or municipality will also have to address issues of mixed use, densification, transit and safety.

The notion of a walkable city fits into Lynch’s fourth principle of access, in the article *A walkable neighbourhood: A literature review* by Emily Talen and Julia Koschinsky, it is noted that *“a commonly accepted rule of thumb is that one’s neighbourhood is considered walkable if services, facilities and amenities – what one needs for daily life- are within 0.25 to 0.5 miles (0.4 to 0.8 km) of one’s home”* this is based on the rule of thumb that pedestrians walk just under 5km in an hour, and that a 30 minute walk or 2.5km is considered a reasonable upper bound for residents (Talen & Koschinsky, 2013: 45). Since this site caters to commuters and businesspeople the yard stick of the lower 5 minute walk, or 0.4km walk, will be applied.

WALKING DISTANCES FROM PTA STATION

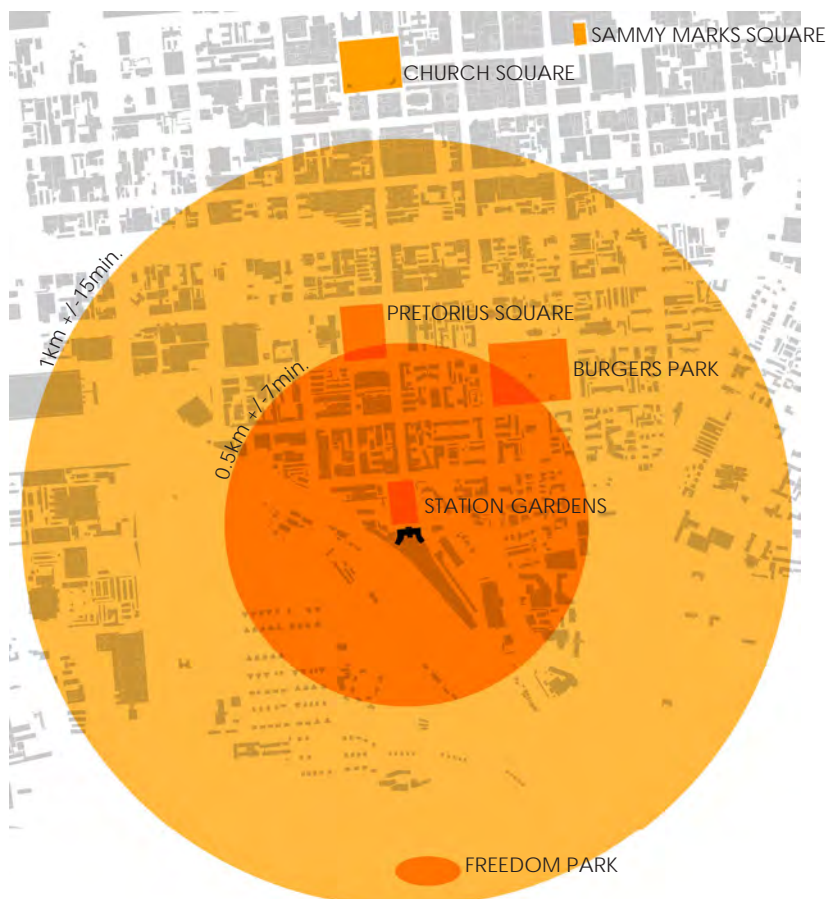


Figure 26. Shows the walking distances between the various public nodes around the Pretoria Station. The distances may be reasonable but the lack of intentionally designed and planned pedestrian routes make this part of the city uncomfortable and at times unsafe to walk through.

# INVESTIGATION OF PUBLIC URBAN SPACES IN PRETORIA

Pretoria is in desperate need of appropriate public urban space. This statement will be justified by investigating five existing public urban spaces within the city using urban principles by Kevin Lynch as many of his principles are found in other new urbanist theories. These principles are seen as the integral early definitions of good urban design, testing them on public urban space in Pretoria will provide a good indication of the urgency for urban renewal in the Pretoria CBD area.

Lynch identified these 5 performance dimensions of urban design:

1. **Vitality** is the degree to which the form of places supports the functions, biological requirements and capabilities of human beings.
2. **Sense** is the degree to which places can be clearly perceived and structured in time and space by users.
3. **Fit** is the degree to which the form and capacity of spaces matches the patterns of behaviors that people engage in or want to engage in.
4. **Access** is the ability to reach other persons, activities, resources, services, information or places this includes the quantity and diversity of elements that can be reached.
5. **Control** is the degree to which those who work or reside in places can create and manage access to spaces and activities.



Figures 68. Church Square, Pretoria

## Church Square

- **Vitality** Most buildings surrounding the public square are introverted and hard edged and do not contribute to an active space when events aren't arranged (there are few amenities that serve the public).
- + **Sense** The layout and legibility of the square is emphasised by the symmetry and axis of roads and buildings surrounding it.
- **Fit** Human behaviours have adapted to the rigidity of the square, rather than the square being able to adapt to behaviours of humans.
- + **Access** The central location of Church Square means that it is easy to access by foot or by car.
- **Control** The public have very little opportunity to adapt the space, it is state controlled and in a way rejects public participation.



Figures 69. Axonometric sketch of Church Square, Pretoria

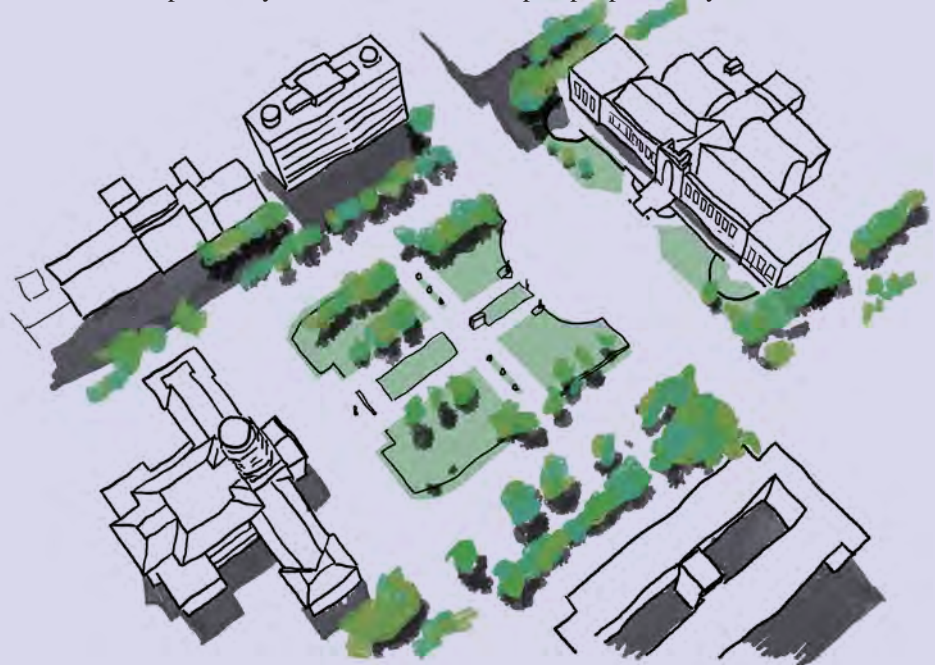




Figures 70. Pretorius Square, Pretoria

## Pretorius Square

- **Vitality** People tend to retreat from the harsh open space.
- + **Sense** The space is self-referential and is well defined along a central axis, and reads clearly as a monumental civic space.
- **Fit** The imposing nature of the space distances itself from the populace, as a park (garden) it lacks recreational opportunities.
- **Access** Homogeneous municipal and business functions surrounding the space have resulted in it being deserted most of the time.
- **Control** If mixed use functions were introduced to the space, it might promote access but until then it remains an impressive yet inaccessible backdrop to people's daily lives.



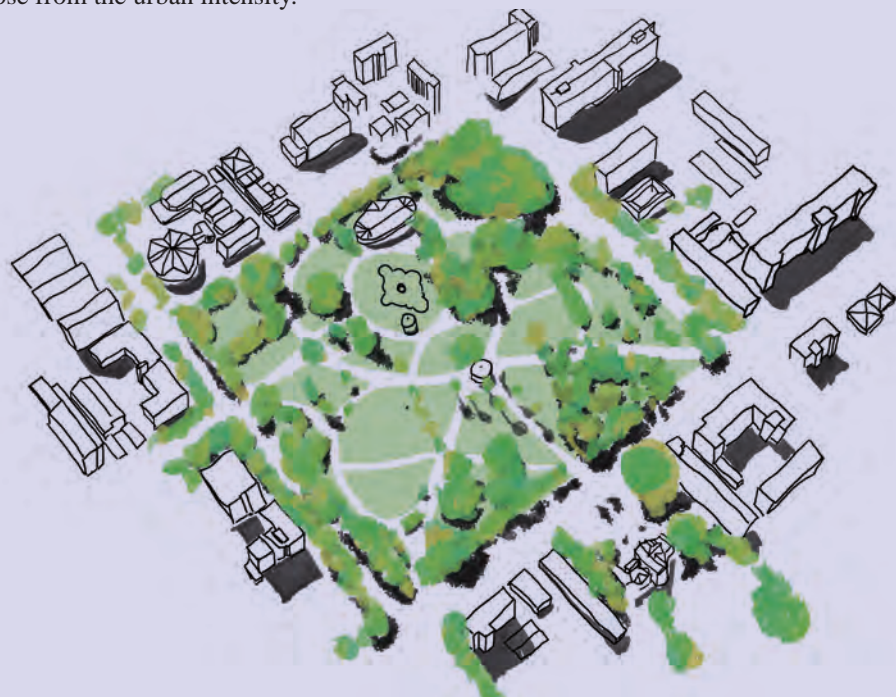
Figures 71. Axonometric sketch of Pretorius Square, Pretoria



Figures 72. Burgers Park, Pretoria

## Burgers Park

- + **Vitality** The well-designed park provides a beautiful mixture of open and intimate spaces which the public use well.
- + **Sense** The pattern of the garden layout responds to the rigid Pretoria grid and distorts it.
- + **Fit** Surrounding residential, religious, hotel and office buildings benefit greatly from a well maintained garden.
- + **Access** The Park is ideally located since it only needs to serve the residents surrounding it.
- + **Control** The space does not lend itself to re-appropriation but it serves its goal as a beautiful repose from the urban intensity.



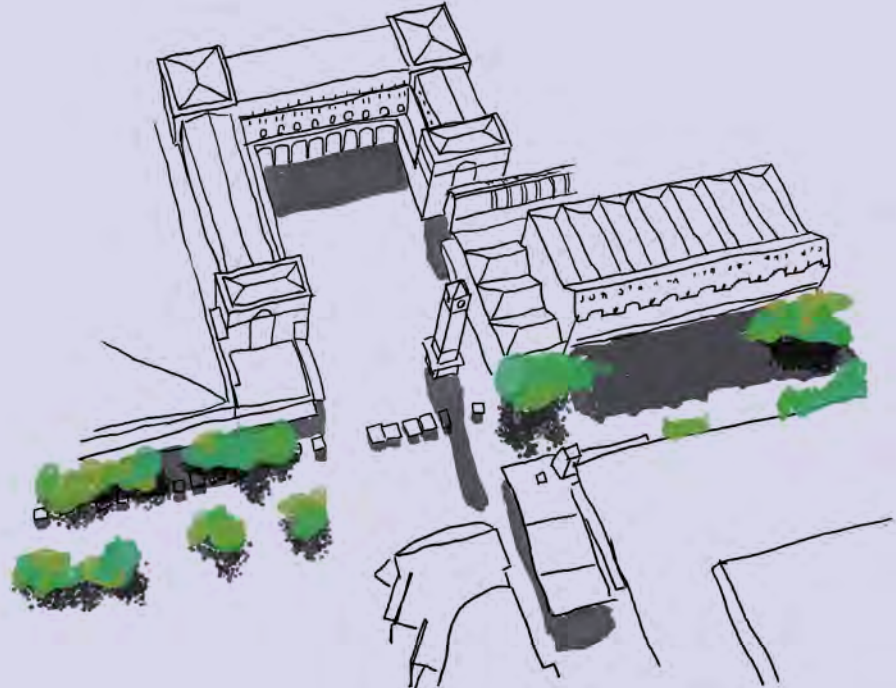
Figures 73. Axonometric sketch of Burgers Park, Pretoria



Figures 74. Sammy Marks Square, Pretoria

## Sammy Marks Square

- **Vitality** The open court provides opportunities for businesses and entrepreneurs to showcase their wares to the public, they on the other hand are left standing in a flat open plain.
- **Sense** The space is well defined but its relationship to the surrounding context is ill fitting.
- + **Fit** It is an inner city shopping mall and its role as a thoroughfare and public square is well used and maintained.
- + **Access** Central location and nearby parking makes it easy to use the space as a starting point to a day in Pretoria.
- **Control** The commercial nature of the square itself pushes informal activities to the street side.



Figures 75. Axonometric sketch of Sammy Marks Square, Pretoria



Figures 76. Pretoria Station, Pretoria

## Pretoria Station

- **Vitality** The garden provides sufficient seating but little else.
- **Sense** The garden itself responds very well as a link between the station and Paul Kruger Street leading Church square unfortunately every other building on site has another agenda.
- **Fit** Since most of the site is relegated to vehicles, little open space is left for people to adapt. Surrounding residents would rather walk further to Burgers Park.
- + **Access** Trains, busses, cars, tuc-tucs and taxis serve this site although the layout disregards the commuters.
- **Control** The edges of the garden are used reluctantly by entrepreneurs and vendors, and a few semi-permanent fast food stalls.



Figures 77. Axonometric sketch of Pretoria Station, Pretoria



The analysis of civic space by using New Urbanist principles by Kevin Lynch shows that Burgers Park is the only civic space which succeeds in meeting requirements penned in the 60s. The spaces generally lack vitality as they cater to a limited group of people such as only to those with private vehicles or they exclude amenities for disabled persons or do not provide any facilities for children.

Many of the spaces perform well with the dimension of sense since their layout was implemented during the aesthetic urban tradition which was concerned with the experience (mostly visually) of a space in time. Although the spaces are legible and easily comprehended in space and time, they do have a sense of austerity and of space frozen in time not adaptable or able to be appropriated.

The principle of Fit is not addressed by the architecture or urban design of most of these spaces, their forced appropriation by entrepreneurs and traders has led to innovative solutions to spatial problems but has simultaneously created spaces that are unsanitary or unsafe.

Since the chosen sites were located in the central Pretoria area, access is only a problem where mono-functional zones have developed. Most of the civic spaces are privatised public spaces or poorly managed municipal spaces which alienates and prevents the public from possible appropriation.

The above mentioned civic spaces also fail to meet other goals or criteria for good public urban space as specified by urban theorists such as Allan Jacobs and Donald Appleyard. Jacobs and Appleyard specified seven goals for good urban environments namely: liveability, identity and control, access to opportunities, authenticity and meaning, community and public life, urban self-reliance and an environment for all. Ian Bently writes about responsive city typologies that consist of six types: The deformed grid, complex use patterns, the robust plot development, the positive privacy gradient, the perimeter block and the native biotic network. McGlynn and Murrain name four fundamental qualities of good urban environments: Permeability, variety, legibility and robustness (Cormana 2010: 8-9).

By testing the success of the Pretoria station site with Kevin Lynch's 5 requirements an idea of its shortcomings and successes could be generated, this made it possible to propose various interventions and goals which would improve the condition of the site. These are seen as goals which the proposed design aims to achieve.

### **Vitality**

The introduction of public ablution facilities, urban furniture, adequate shading, SANS compliant ramps and stairs and redesigning existing functions of the informal market, national bus interchange, clinic and police station can ensure that the space supports the functions, biological requirements and capabilities of human beings.

### **Sense**

Buildings can frame the garden square in front of the station to ensure that it is perceived as a defined and celebrated civic space connecting to the inner city and responding to the existing urban grid. Other building positions, footprints and elevations can highlight movement routes between important nodes ensuring that the site is clearly perceived and structured in time and space by users.

### **Fit**

The behaviour patterns of the various users of the site must be taken into account, Businesspeople require space and services for lunch and for informal meetings. Residents can be provided with outlets for grocery shopping and a choice of shaded and sunny landscapes for recreation. Tourists and visitors can be provided with an information kiosk, restaurants and promenades that provide a view of Pretoria and activated walking routes that connect to various attractions in the city. Commuters should be provided with comfortable walking routes that pass fast food services, cafés, a grocery store, informal market and any other necessary amenity within close proximity to their transport station. Entrepreneurs and artists can be provided with various scales of open public space where performances, exhibitions and stalls could be set up.

### **Access**

The proposal should make the site walkable, implying that it provides users with a mix of essential services, resources, information, activities and places. The site must remain the major transportation hub for Pretoria and should be fundamentally accessible catering to all income groups and cultures and be connected to services, resources and activities that cannot be accommodated on site.

### **Control**

Open plan internal layouts and open squares can allow for appropriation in the present as well as over time. The buildings and site should be managed by a centralised body located on site that would allow for direct contact and simple processes for the rental or purchasing of spaces.





Figure 78. Pretoria Station, Pretoria

# CIVIC SPACE

The location of the Pretoria Station is so prominent within Pretoria (and by association South Africa) that the city will benefit greatly from a functioning and healthy civic space at this location. CIVICUS is a global civil society alliance that works to strengthen citizen action and civil society especially where participatory democracy and citizens' freedom of association are threatened. Civil society is described as: civil society networks and organisations; trade unions; faith-based networks; professional associations; NGO capacity development organisations; philanthropic foundations and other funding bodies. The organisation investigates and rates countries by their openness or repression, South Africa is said to have a strong culture of civic activism and a progressive constitution but that its citizens are witnessing a declining respect for civic space. Protest action is described as mostly peaceful but that the police sometimes employ restrictive and violent tactics to curb them. The government is said to be increasing its efforts to *"impose a culture of secrecy by attempting to control critical or inconvenient information."* (monitor.civicus.org 2016) as well as accuse civil society organisations of colluding with external powers to undermine the government contributing to a climate of fear and uncertainty. Civic spaces are described as the *"bedrock of any open and democratic society."* (monitor.civicus.org 2017). These spaces allow people to organise, participate and communicate freely and thereby they are able to engage with and influence the political and social structures around them, this is a goal to which this project strives.

Project for Public Spaces (PPS) is a nonprofit planning, design and educational organisation that describes the value of civic space as an extension of the community and a stage for public lives. Civic spaces are places where celebrations are held, social and economic exchanges take place and where cultures mix. These spaces create a strong sense of community by drawing people together and encouraging them to interact with one another and with their government (pps.org 2009). Matthew Cormana refers to Oldenburg who comments that spaces such as these are integral to people's lives and that without them the promise of the city is denied because the urban area *"fails to nourish the kinds of relationships and the diversity of human contact that are the essence of the city"* (Cormana 2010: 24). The benefits of civic spaces which are successful public spaces are that they contribute to the health of the community, this may be socially, economically, culturally or environmentally. The space not only becomes a visual beacon, it also provides character and a forum for public activities (CIVICUS, 2017).

The Pretoria Station site is definitely a civic space due to its location and important role within the city but it lacks the spacial definitions, humaneness and character of a good civic space. The citizens of Gauteng have expressed their concern over a lack of public urban spaces, the Gauteng City-Region Observatory (GCRO) found that only 45% of people in the district were satisfied with public spaces. GCRO also found that 77% of people believe that more parks and green spaces are required (Trangos et al. 2017). A poor urban environment which is uninspiring, unsafe, lacking density, diversity and access does not encourage people to engage with it or care to improve it. Failing to address these sentiments, people will increasingly turn to alternatives to satisfy their desire to socialise and interact in a safe environment. In particular and as precedents show, social media is seeing increased use as a means to interact with one's community. Thus the information people gain about their environment is less through firsthand experience and more through second hand sources that may be unreliable /biased or untrue. It is therefore imperative to find alternatives to the isolated, acontextual, ahistorical and opinion driven forms of engagement provided by media and social media. By situating a civic space adjacent to civic functions and at a bustling urban transportation node, unrest or disagreement can be quickly recognised and hopefully resolved rather than allowing them to fester in the media realm or in isolated public environments.

PPS has implemented a few design initiatives to create great civic spaces across Europe and America. They recognise that often no major design intervention needs to be applied in order for a civic space to become great. Pittsburgh's Market Square (see figure 79) was transformed into



Figure 79. Pittsburg Market Square.

a hub of community activity with a few simple and low cost interventions, the largest of which were: the closure of roads that ran through the space, widened sidewalks, tree plantings and seating.

In 2010 PPS developed a Street Typology System for Brunswick, Maine in the US. *“Brunswick realized that their focus on tuning their streets for moving vehicular traffic was constricting commerce and quality of life, while also threatening bicycle and pedestrian safety. PPS worked with Brunswick on a plan to rebalance their streets to support all modes of transportation, boost economic development and enhance quality of life.”* (PPS, 2010). A Downtown Master Plan Committee was set up to support the image of Brunswick as a community in which to live, work, visit and do business. With the help of the local community this would be achieved by focusing on five areas namely: Visual Quality, Pedestrian and Vehicular Movement, Neighborhoods, Marketing and Financing which are addressed as short term and long term recommendations. All of the PPS projects consider the humanism of public spaces as well as how the surrounding community may benefit economically and socially. This is expressed in their concept “The Power of 10+” which is focused on the human scale of Placemaking as this is where cities either succeed or fail. The argument here is that places begin to thrive when people have more than ten reasons to visit it. This can be applied at three scales: A city should have at least ten major destinations, a destination should have at least ten places and the place should have at least ten things to do. These may be basic things to do such as meeting people, listening to music, eating, playing on playgrounds, watching performances or engaging with art (PPS, 2009).

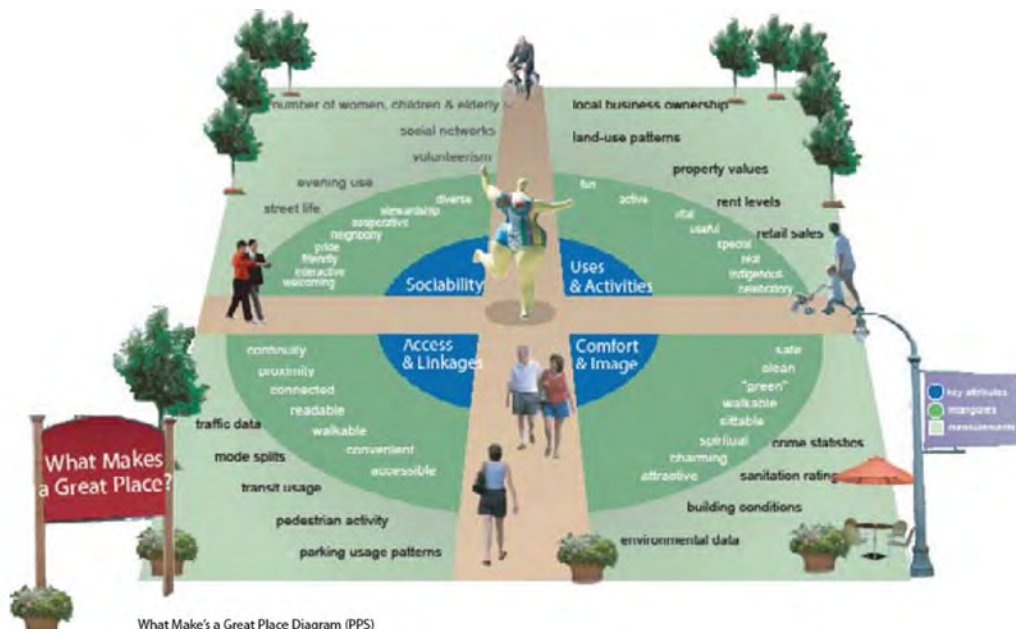


Figure 80. PPS placemaking process which they call 'The Power of 10+'



# ARCHITECTURAL THEORY

In order for the proposed architecture to fit into its social and cultural paradigm it certainly also needs to fit into the established architectural paradigm. This article will focus on gaining an understanding of the development of architectural languages in South Africa, so that the proposed design may respond appropriately.

Post Pretoria regionalism there has been a tendency to create architecture that claims contextual relevance with iconography and reference to traditional African forms that is often superficial. These projects do have noble intentions but their predominantly academic focus often neglects to address the needs or habits of the communities who live around the sites.

StudioMAS architects designed the Walter Sisulu Square of Dedication (WSSD) in Soweto which is charged with symbolic meaning. The articles of the Freedom charter is symbolized by ten pillars on the eastern side, a conical structure represents its signing and the grid of cross shaped benches represents enfranchisement. The site also contains a market place, a taxi rank, educational facilities and is flanked by buildings of cultural, institutional and commercial use (Joubert, 2009).

Does low density rural surroundings of the site call for the vastness of this intervention?. It almost resembles La Defense in Paris (See Figure 83) a business district housing 500 companies situated within a “*first-class economic hub*” and integrally linked to the city with 5 railway lines, 22 bus lines and 23 000 parking spaces (Paris-La Defense, 2017). Even with all this activity surrounding the square, its center remains relatively quiet unless events are arranged.



Figure 81. Walter Sisulu Square of Dedication. A vast (empty) internal square.



Figure 83. A vast square at La Defense in Paris activated by urban density, accessibility and tourism.



Activity at WSSD is concentrated at the peripheries where movement routes and transport nodes are located. Fortunately the buildings respond well to the requirements of the people providing space for informal activities, shading, seating and clear, legible walking routes.

The open square on the other hand reads as a vast parking lot leading from nowhere to nowhere, apparently the vastness should encourage improvisation of space - but lacking an audience, this noble vision remains a pipe dream. The redeeming quality of the space is that its open-endedness allows for future development and adaption.

The Baragwanath transport interchange and traders market by Urban Solutions + Urban Designers (See figure 85) was completed in 2006, the architecture addresses issues of human comfort in the urban context. The project forms part of the Johannesburg Metropolitan Council's Baralink Development Framework which aims to integrate and uplift the area as an important gateway to Soweto (Ludwigshansen, 2008). It contains a taxi rank, bus rank, market and a taxi holding area with much attention paid to hygiene and safety. The Buildings create an activated route connecting various nodes with a covered walkway. The designers have rejected the lightweight steel language of similar projects in favour of a heavier concrete aesthetic which creates a sense of permanence (See figure 86) and becomes a monument to mass commuting (Joubert, 2009). The architecture does continue some aspects of the regionalism movement with its empowerment of local artists who contributed to the landmark elements of the architecture thereby enhancing a sense of identity and ownership (Ludwigshansen, 2008).



Figure 82. Low density urban sprawl of Soweto surrounding the WSSD.



Figure 85. Photo showing the comfortable space in the Baragwanath taxi rank (gautengfilm.org.za, 2014).



Figure 84. WSSD edges provide people with a green shaded comfortable environment.



Figure 86. Exterior of the Baragwanath interchange with wide eaves which provide opportunity for appropriation.

The Freedom Park Project is an example of an attempt to create a contemporary South African architectural identity. Designed jointly by Mashabane Rose and Associates, Gapp Architects and Urban Designers and MMA Architects. The design of The Sikhumbutho on top of the hill (See figure 87-88) as well as the later Hapo Museum takes Traditional Knowledge Systems into account with input from traditional healers. Thus the space is imbued with spiritual gravitas and is intended to be a national symbol within the capital. The sculptural architecture is integrated with the natural landscape and is intended to be representative of the diverse cultures and identities of all South Africans (mashabanerose, 2017).

*“The team of architects were encouraged to encompass ideas that arose from rural architecture, traditional homestead design and iks, to consider the unique architectural structures and urban formations from sites across southern Africa, including Mapangubwe, great Zimbabwe and the mountains in the Free State. The conversation challenged the architectural team to search for essential and universal qualities in architecture to answer the complex process of a large client body with a range of opinions.”* (mashababerose, 2017).

The end result is a respectful architecture that is heavy with symbolic meaning, visually the design appears to flow through the landscape indicative of the narrative it is embodying.

Freedom Park today is not a very popular tourist destination as they rather flock to the Voortrekker Monument. In 2011, on reconciliation day, President Jacob Zuma opened the ‘Reconciliation Road’, a direct link between the Voortrekker Monument and Freedom Park. Sadly the events and actions of the recent past where the defacing of monuments has become heroic has led to the closure of this route. Luke Alfred writes about his visit to Freedom Park in 2015: *“The casing of ground-level light fittings on the pathways to the Wall of Remembrance often spilled out onto the path itself and although the facility is pristine, melancholy hung in the air. This is the peculiarly accented melancholy of underuse, of so much time and effort spent in the creation of a special place which no one seems to see or care for.”* (Alfred, 2015). It appears as though the significance of Freedom Park has gone mostly unnoticed by the general public. Could this be because of its isolated walled off location; poor access and integration with surrounding areas; the sense of a fenced off high security estate with an entrance fee or the fact that one is prodded to have some political, cultural enlightenment when visiting rather than simply enjoying the space?.

Theoretically and architecturally the space is significant but its lack of public appeal is rapidly transforming it into a white elephant. It is therefore imperative that the proposed project strengthens the link between freedom park and the city with a celebrated pedestrian route as well as a more direct vehicular route. This would have the added benefits of uplifting the entire Salvokop area through improved access and with the planned future developments contained in the Tshwane 2055 plans which would ensure that the area truly becomes part of Pretoria city.



Figure 87. An aerial view of the Sikhumbutho in Freedom Park.



Figure 88. A view over the designed landscape of Freedom Park's Garden of Remembrance.

# SUSTAINABILITY

An important development in the field of architecture has been the contribution of sustainable design and systems. It has become a primary focus in the design process to ensure that a building has a low carbon footprint often at the cost of context driven considerations. These monuments to the concerns of the wealthy often neglect to consider their polluting effects on the surrounding community, as green walls, solar panels and low energy solutions ensure that these buildings win awards, the benefit to people on the ground in the present will probably never be felt.

A prime example of this is Menlyn Maine which claims to be Africa's first green city with systems that ensure sustainable uses of energy consumption, water consumption, transportation and waste management (Menlyn Maine. 2017). These valid sustainable considerations have resulted in a complex which caters to the wealthy propagating the unsustainable class divisions that are already so extreme in South Africa. The value of 'green' and 'sustainable' notions is not questioned but when these are applied at great cost as a primary incentive they tend to damage the urban environment and communities surrounding them.

In a biographical book on Alvar Aalto, Goran Schildt notes that there was a great interest in the "*ability of technics to make people happy*" and that it would be natural for third world countries to view the mechanical arts as containing the power to solve all problems (Flieg, K., 1963:15). Schildt notes that this faith in technics is reminiscent of the European modernism of the 1920's "*...the Bauhaus' and Le Corbusier's picture of a rationally analyzed industrial community's functions, exalted to symbols of happiness.*" (Flieg, K., 1963:15). Schildt continues to question the value of this modernist approach and notes that it has had positive impacts on communities including the rising standard of life and paving the way for social justice... (This was just before Jane Jacobs asserted the exact opposite), but that this infatuation with technics meant that unforeseeable problems arose, that "*man is losing himself in a nightmare of consumption, uniformity and overorganisation.*" (Flieg, K., 1963:15). Schildt's observation, that this reverence for technics had become a great danger of his age, is relevant today as a reverence for sustainability would be a great danger to our age whilst providing our biggest opportunity.

# CONCLUSION

Since the post-modern era, architecture has increasingly become visually driven, as Juhani Pallasmaa laments. This dissertation supports that notion but it must be recognised that architecture is a creative field and that a sculptural form that is useful, humane and grounded within its context contributes to the character of place. The visual aspects of a project hindered by the influence of the client or engineer with little sense of aesthetic must be resisted. The numerous mall projects are prime examples of economic and engineering fields imposing on those that deal with aesthetics and creativity.

Historically the work of Antonio Gaudi epitomises the notion of creative freedom with his highly unique architectural form which has added to the identity and character of Barcelona. The structural design formed an integral part of the design process which led to his truly unique and timeless architecture.

This dissertation proposes a responsive humanist architecture grounded within its context, community and diverse culture favouring interventions with impacts that are felt in the present and everyday over longer term sustainability goals or goals which have great intellectual value but no value to the people who use and pass through the architecture on a daily basis. The sustainability of the architecture is seen as important but is secondary to the other considerations mentioned above. Alvar Aalto had this approach to architecture *“To accept, without a trace of romantic refusal of reality, the whole of the modern age with its technical and economic resources, but to be clearly aware of the dangers and to show that technics can be made to serve man instead of the reverse - this was Alvar Aalto’s architectural program.”* (Flieg, K., 1963:15).

This dissertation positions itself firmly in the Place Making Tradition by firstly investigating the site where patterns and complex relationships between activities and places will be investigated. Once these are understood an aesthetic language can be proposed which would contribute to its visual qualities and experience.





# 4 RESPONSES

# SE

CONCEPT  
URBAN VISION  
SITE VISION  
INITIAL DESIGN INVESTIGATIONS  
PROGRAM  
DESIGN DEVELOPMENT  
INITIAL DESIGN  
FINAL DESIGN AND TECHNIFICATION

# CONCEPT

## PROJECT INTENTIONS

Through the analysis done in previous chapters, certain themes have come to the fore which may help in developing a concept for the project. Key themes that were identified are humanism (people and public), networks (community and activities) and context (African, site and urban). Another helpful theme is that of boundaries, identified as those that are physical urban and those between the digital and real social space, between the state/government and citizens and between people and the city.

In order to break down these boundaries, New Urbanist principles of networks, humanism and holism will be used.

These themes will be translated into spacial forms by making associations that will guide the design development with a continuous thread. These associations should have relevance to the research done in previous chapters as well as to the context of Pretoria.

The station is the focus of much urban activity where thousands of people converge in order to gain access to the city this was translated into the metaphor of a knot. The diversity of people and activities on site creates the perfect opportunity to encourage interaction and dialogue between them. Pedestrian trajectories are interwoven at this civic knot thereby increasing contact between different users. The knot is framed by buildings which hold it in time and space whilst reacting to the nature of the threads (pedestrian trajectories) that form the knot.

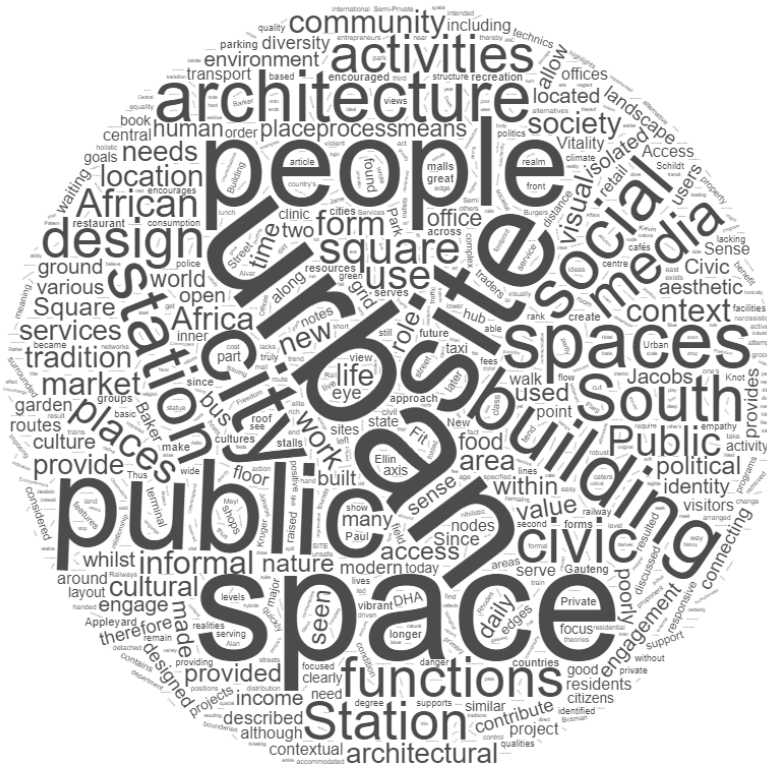


Figure. A word cloud of part of this dissertation highlights important themes that recur throughout.



## BOUNDARIES

### NATURAL BOUNDARIES

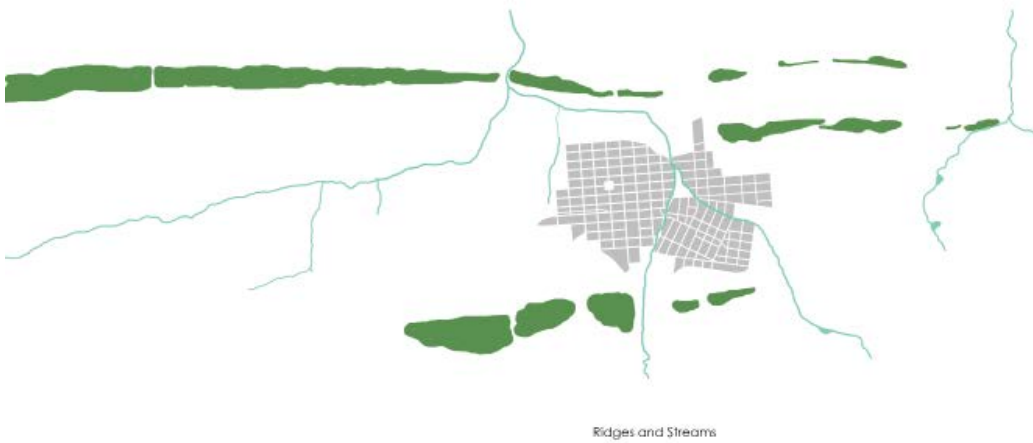


Figure 89. Streams and Ridges were mapped which interfere with the urban grid and which may contribute to separated urban areas, the space that surrounds these are often poorly developed or unsafe.

### ARTIFICIAL BOUNDARIES

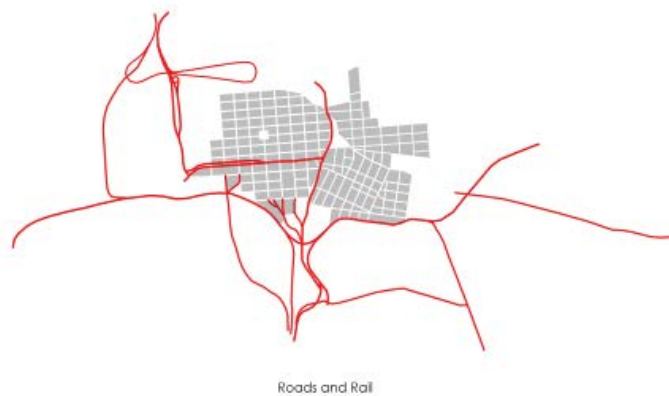


Figure 90. Railway lines and wide high speed roads are artificial boundaries which divide the city into separate areas making it difficult for pedestrians to use the city.

### RACIAL BOUNDARIES



Figure 91. Racial boundaries are quickly being eroded in the inner city, although they are still evident on the peripheries.

## CONCEPTUAL MAPPING



Figure 92. Diagrammatic map indicating an overlay of racial, natural and artificial boundaries. The Nelson Mandela road with the Apies River, the railway lines and Nana Sita Street are major boundaries which inhibit the flow of pedestrians, activities and functions across the city. Orange lines suggest streets and routes that could be pedestrianised and activated in order to facilitate this process.



Figure 93. Diagrammatic map indicating physical urban boundaries in black and public and civic nodes and possible routes connecting them in orange.



Figure 94. In the greater context of Pretoria boundaries were identified as wide roads with fast moving traffic such as Nelson Mandela Road and Nana Sita Street, the Apies River with unactivated edges creating safety issues. The railway lines which separate Salvokop from the inner city and disrupt the urban grid which results in the fragmentation of sites surrounding it.

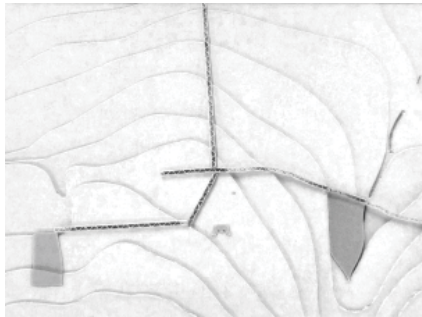


Figure 94. Initial context model indicating contour lines with the three sites chosen by group members with existing roads and routes connecting them.



Figure 95. Context model showing physical urban boundaries that compartmentalise the urban fabric into disconnected zones of use. Here boundaries are seen as solid dividing elements with a light web reaching over and through in order to connect the separated zones.



Figure 96. Context model showing the physical boundaries as voids or areas where the urban fabric is disrupted, creating isolated zones. The connecting intervention has a greater weight as it begins to draw activities and functions over the voids into neighbouring areas.

EXISTING URBAN GRID



Figure 94. Existing orthogonal urban grid is legible and moving between nodes in the city is simple.

DISRUPTED GRID



Figure 95. At the Pretoria Station the orthogonal grid is disrupted by the railway lines.

REACTIVE RESPONSE



Figure 96. The response of the grid disruption was to introduce a complex network of roads which fragment the site into isolated islands surrounded by streets and vehicular traffic. This reactive response leads to a confusing layout that is difficult to navigate for pedestrians and drivers.

REMOVE CLUTTER

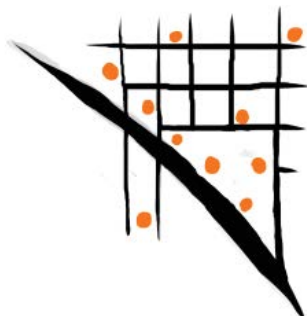


Figure 97. As a response, the grid is stopped rather than distorted so that the area between the orthogonal grid and the diagonal railway lines can be resolved holistically. By removing the network of roads a pattern between nodes can be recognised.

ROTATED GRID



Figure 98. By introducing a rotated grid, the sensibility of the orthogonal grid can be maintained as well as creating the opportunity to connect the dispersed nodes with legible more direct axes. Thus the area begins to favour pedestrian comfort and ease of access.





Figure 99. Existing urban fabric responds to orthogonal grid, the large size of Pretoria blocks are not ideal for pedestrians but they are legible and sensible.



Figure 100. The regular fabric is disrupted by the railway line.



Figure 101. Where blocks come into contact with the diagonal railway line, they explode into shambles of buildings. The poor configuration of roads contributes to the continued fragmentation of the site. Without the roads, the building positions make no sense at all.



Figure 102. With the introduction of the rotated grid, it is possible to introduce a more dense configuration of buildings without impeding on pedestrian flow. Simultaneously it provides the opportunity to start framing important routes or public spaces allowing them to become civic places.



Figure 103. Diagram indicating vehicular and rail routes which are boundaries that isolate pedestrians and urban activity on the Pretoria Station site from the rest of the city.

It is recognised that these vehicular routes are necessary for access but that the inner city should be for the pedestrian specially where these cross one another.

Here possible locations for stitching elements are considered along active or useful pedestrian routes these are proposed as active splines which continue over vehicular routes.



Figure 104. When zooming into the Pretoria Station site the road and rail boundaries are strengthened by the fenced off edges of privatised land. These need to be disrupted so that the arrival and departure point for thousands of people daily can become more accessible and better integrated with the rest of the city.

In this diagram movement routes between important residential, business, commercial and transport nodes are suggested which cross these boundaries in favour of pedestrian convenience.

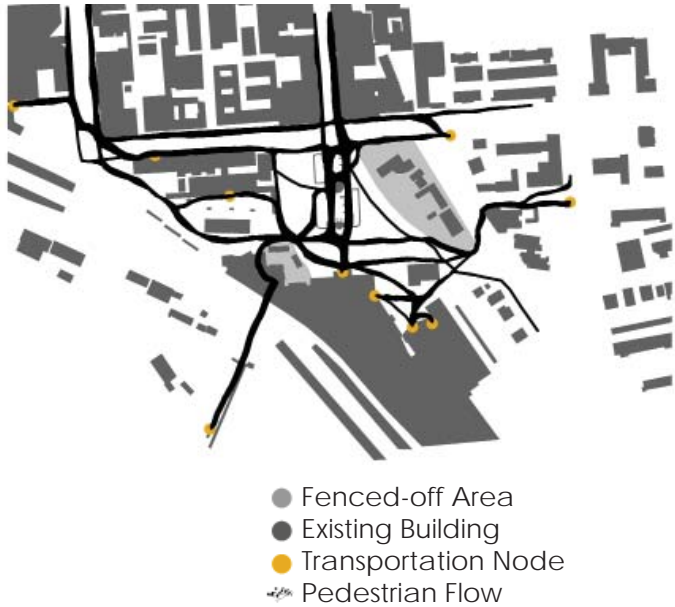


Figure 105. Numerous visits to the Pretoria Station Site enabled an understanding of people's movement behaviours. The Pretoria Station is the main anchor of activity, for many the Pretoria Station is part of a journey which must be completed by minibus taxi. For another large group of people the inner city is their destination and contributes to a bustling Paul Kruger Street. The Station is Also intrinsically linked to Bosman Street Station and Taxi Rank to the North West. At peak hours between 6-8AM and 4-6PM the bridge to Salvokop is tightly packed with rows of residents and businesspeople.

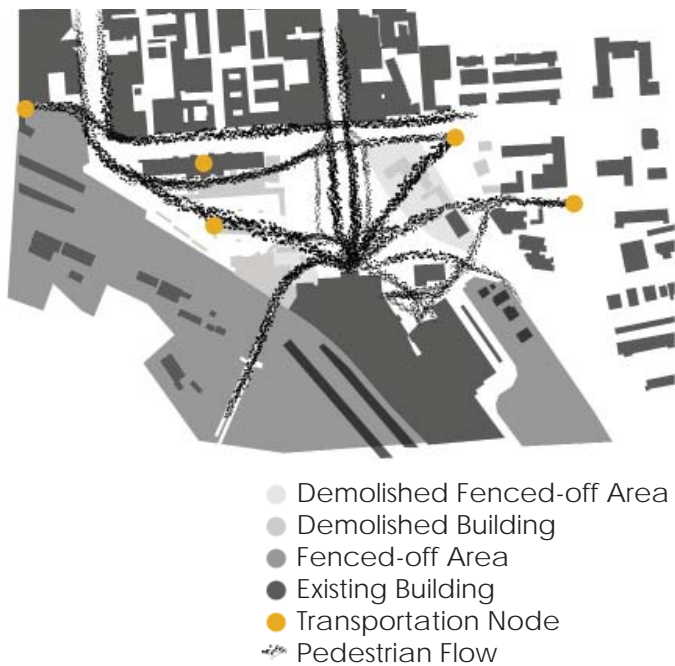


Figure 106. Strategic demolition of fences and buildings which do not have heritage value and which interrupt legibility, access and appearance of the site allows movement routes to become much clearer and more direct. This makes it possible to identify certain user group routes which could then be framed by buildings with active edges.



## EXISTING URBAN CONDITIONS TO PROPOSED RESPONSES



Figure 107. Existing grid with transportation nodes scattered haphazardly around Pretoria Station.



Figure 108. Introduction of rotated grid around the Pretoria Station as the focal point.

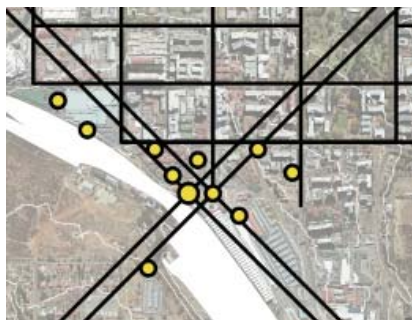


Figure 109. Introduction of the Civic Knot where most of the pedestrian trajectories converge.



Figure 110. Highlighting Civic spaces through which pedestrians travel and around which activity and functions will be focused.



Figure 111. Introduction of building footprints which define and activate pedestrian routes.

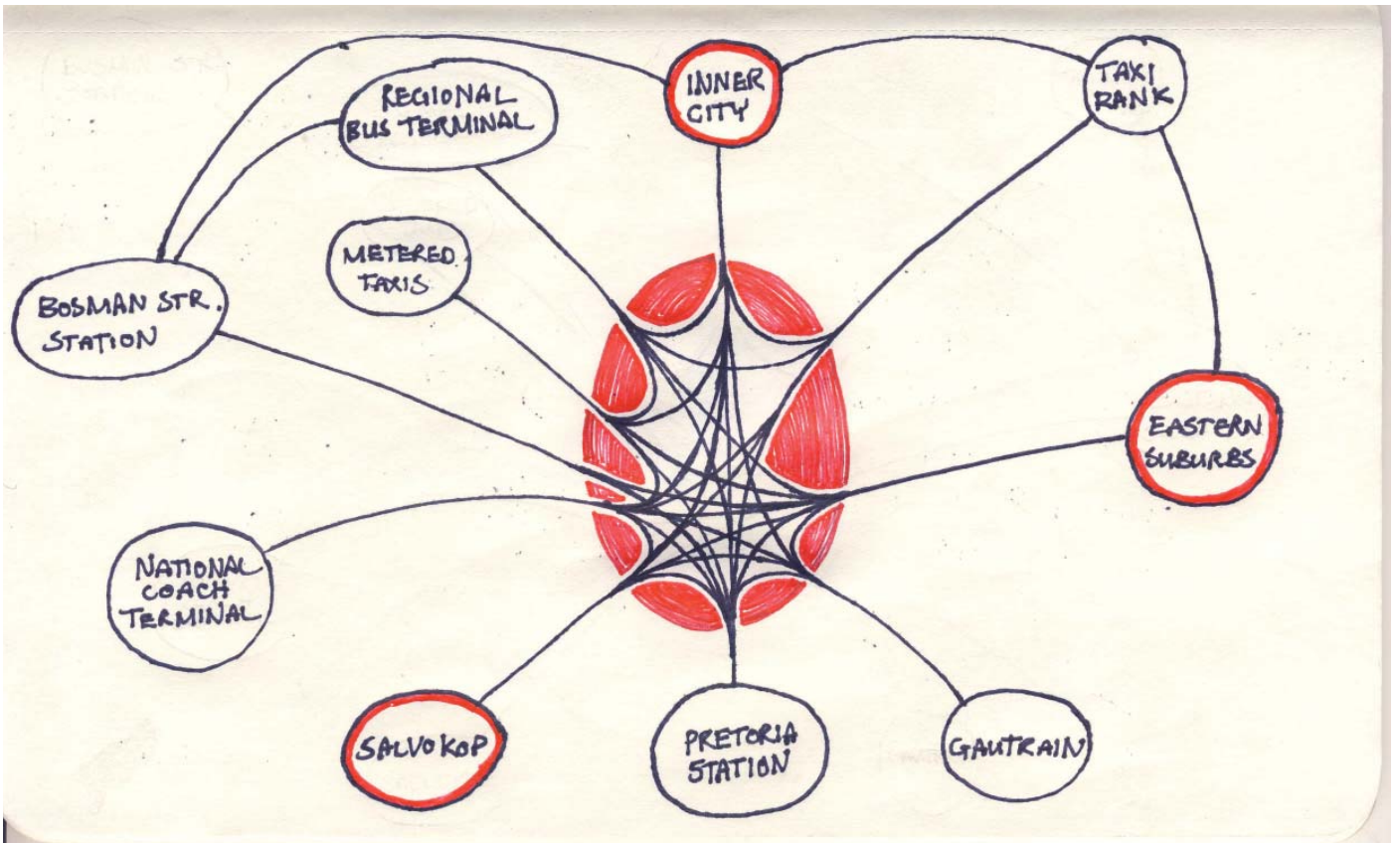


Figure 112. Bubble diagram illustrating network of transport nodes.



# URBAN VISION







Figure 113. Diagram indicating valuable urban space that is poorly defined, unsafe or fragmented.

Urban analysis indicated that cut out areas are either fragmented, unsafe or poorly connected to the city. This is due to amongst others: Physical boundaries such as wide roads with fast moving traffic or the railway lines; lack of defined or activated edges, lack of activities and nearby functions and lack of mixed use.

As the Pretoria Station site provides most of the energy to the area it is logical to commence with urban renewal at this point. These areas should in time be a connected network of active nodes and pedestrian friendly routes. These routes can only function properly if the nodes that they connect to have enough magnetic power. Therefore the PPS "Power of 10+" should be a guideline for every node.

At the Station certain buildings with heritage value are preserved in order to add to the palimpsest of the site.





Figure 114 . Urban Vision showing the zoning and suggested adjustments to the site.



**Public Civic Spaces** are the truly humanist spaces of the city, they provide the opportunity for citizens to engage with their city through recreation, retail, food, exercise, sport, nature, history and culture. These spaces are public parks, museums, sports facilities, squares, scenic promenades, gyms, playgrounds or open space that can be appropriated.

**Residential zones** of higher density living conditions usually with commercial activities on the street edges.

**Business zones** are mixed use zones including offices, schools or colleges or government services.

**Hotel and Accommodation zones** cater to visitors and tourists to Pretoria, these are focused around Burgers Park and around the Pretoria Station.

**Retail zones** are mixed use zones which also may offer services.

**Pedestrianised routes** have widened sidewalks for pedestrians and cyclists, softscaping and street furniture. These routes connect disparate areas of the city as well as the public civic spaces.

- Public Civic Space
- Residential Zone
- Business Zone
- Hotel and Accommodation Zone
- Retail Zone
- Pedestrianised Routes
- .... Activated Edges



# SITE VISION

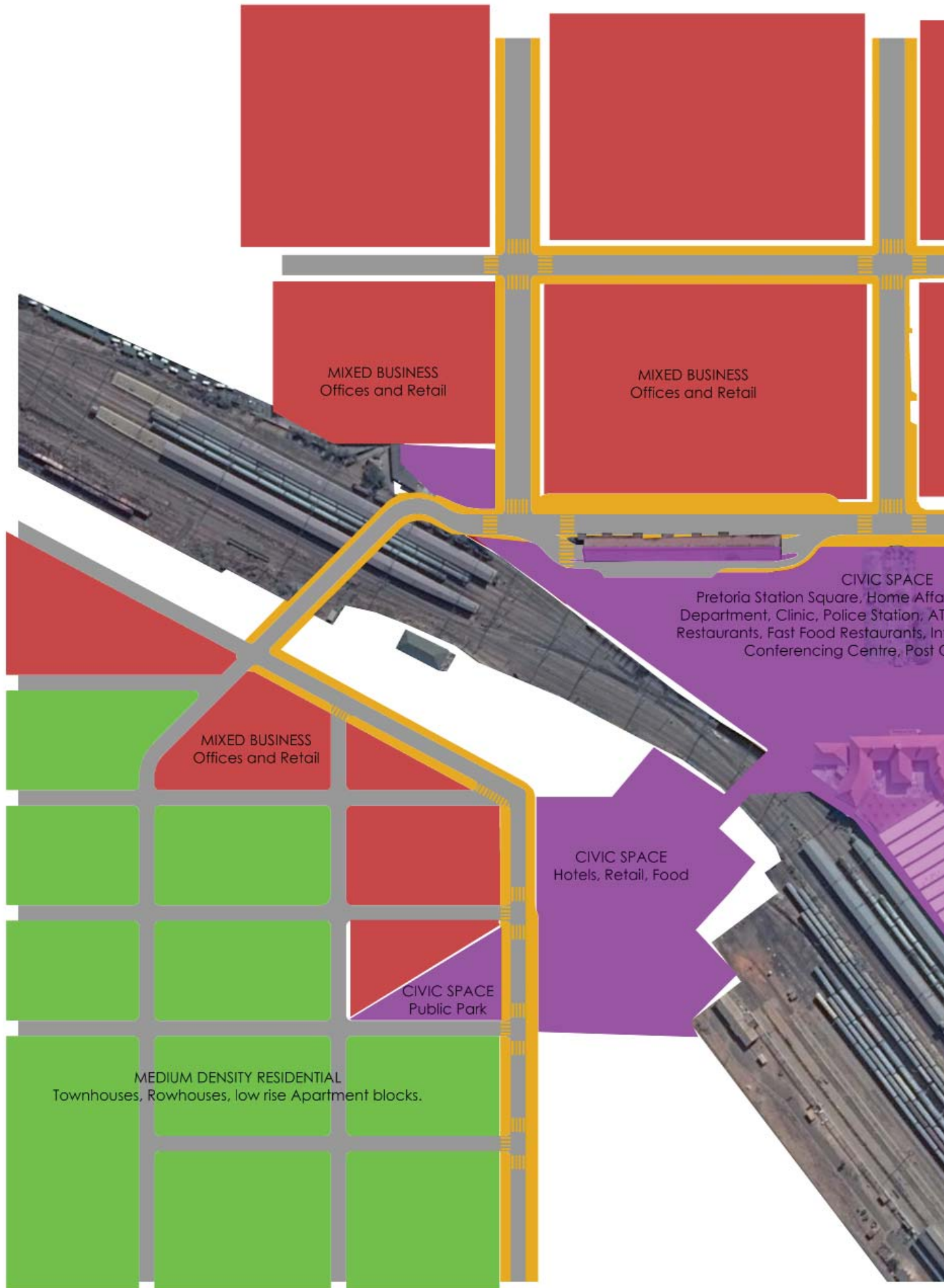






Figure 115.

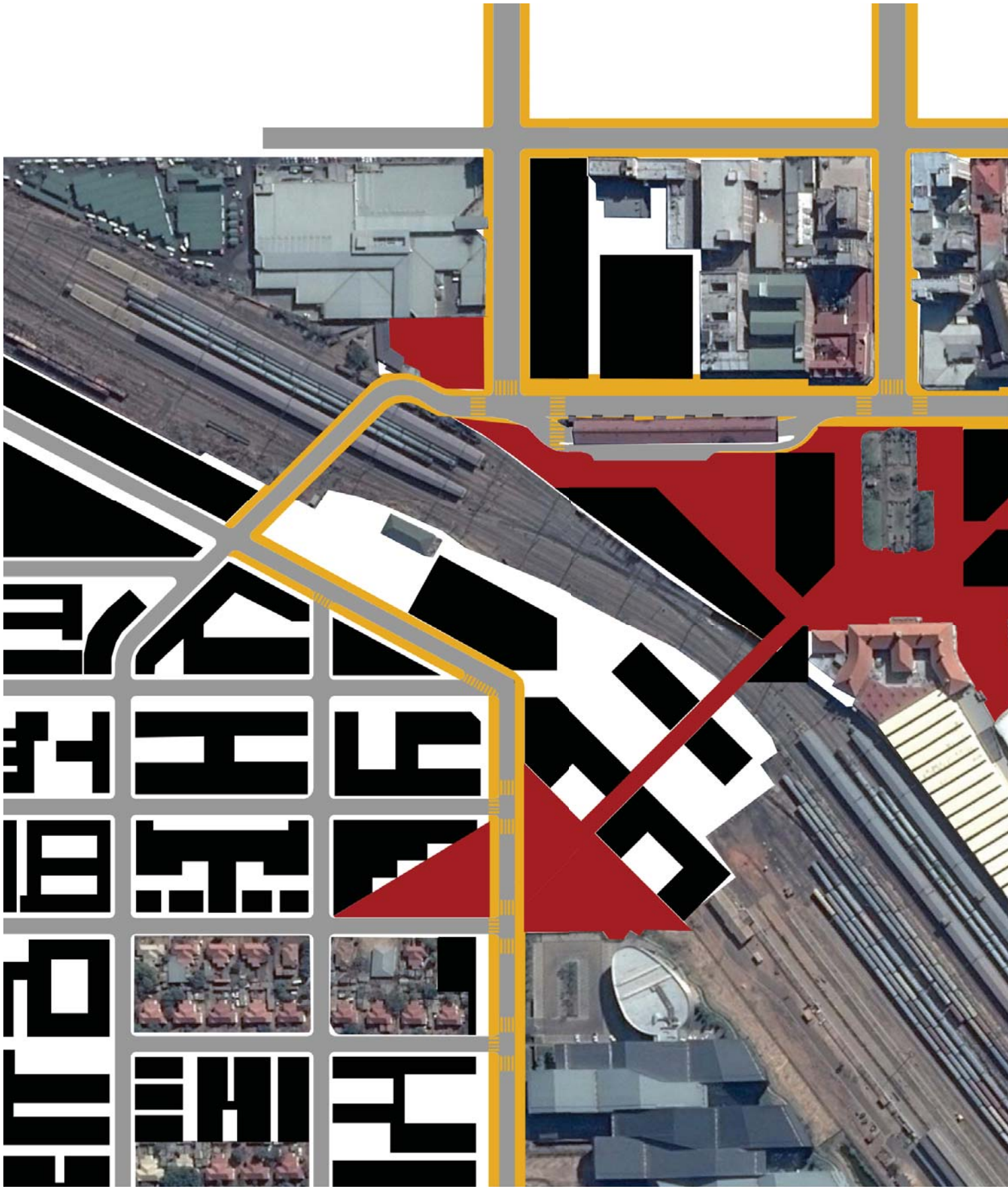






Figure 116. Aerial photograph of the station precinct with building footprints indicated in black, pedestrianised sidewalks in orange and pedestrianised precincts in red. The pedestrianised precincts are meant to be civic spaces surrounded by public amenities which cater to the inhabitants and visitors of the city.



# INITIAL DESIGN INVESTIGATIONS

DEVELOPMENT: PEDESTRIAN ROUTES DETERMINE PROPOSED BUILDING FOOTPRINTS



Figure 117

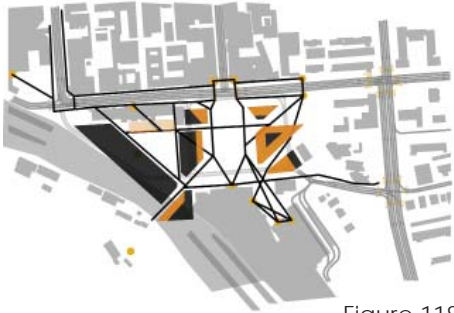


Figure 118

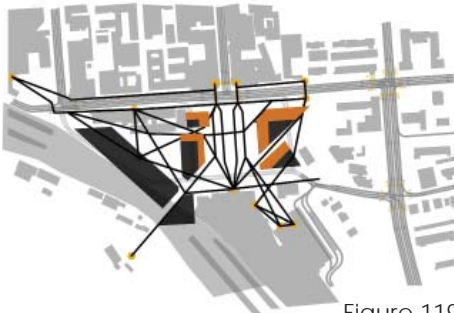


Figure 119

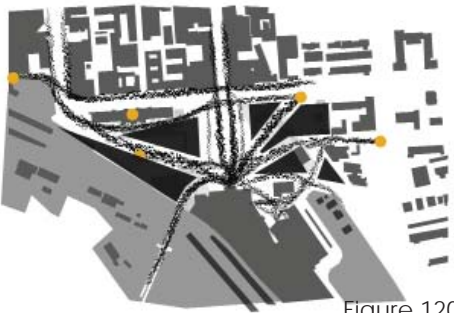


Figure 120

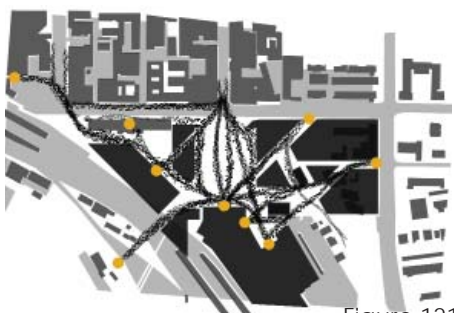


Figure 121

Figures 117 - 121. Building footprints were investigated that would surround the pedestrian routes, thereby providing the opportunity to create comfortable promenades surrounded by public buildings with public interfaces and which provide shading for pedestrians and for informal traders.

Various investigations led to building footprints which took pedestrian routes and the rotated grid into account. The site legibility was improved by drawing the rationality of the existing urban grid to the north and distorting and rotating it to accommodate the routes and nodes.

CONCEPTUAL MODELS INDICATING ARRANGEMENT OF FORMS AROUND THE CIVIC KNOT.



Figure 122.



Figure 123.



Figure 124.



Figure 125.



Figure 126.

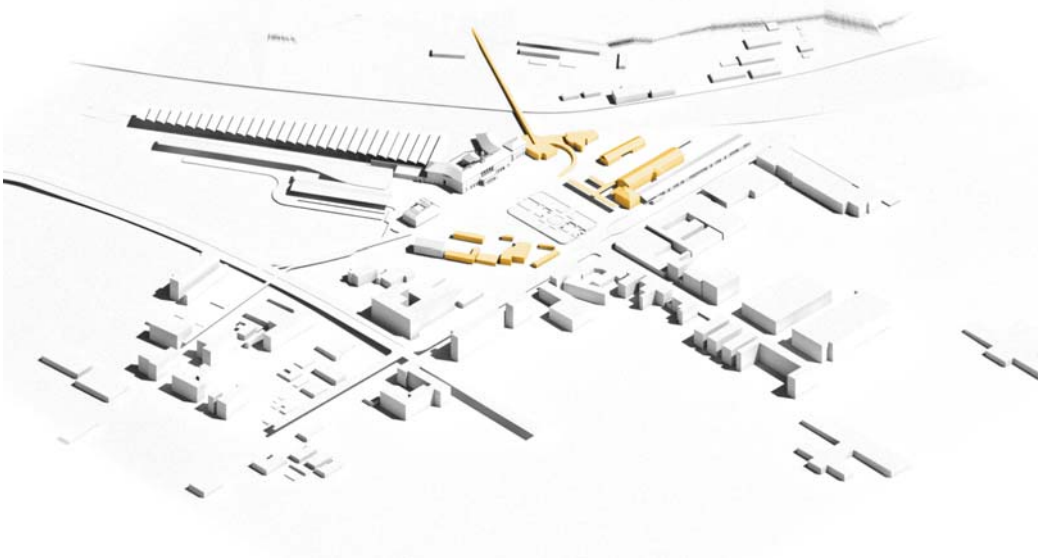


Figure 127. Existing Site with buildings and structures to be demolished highlighted

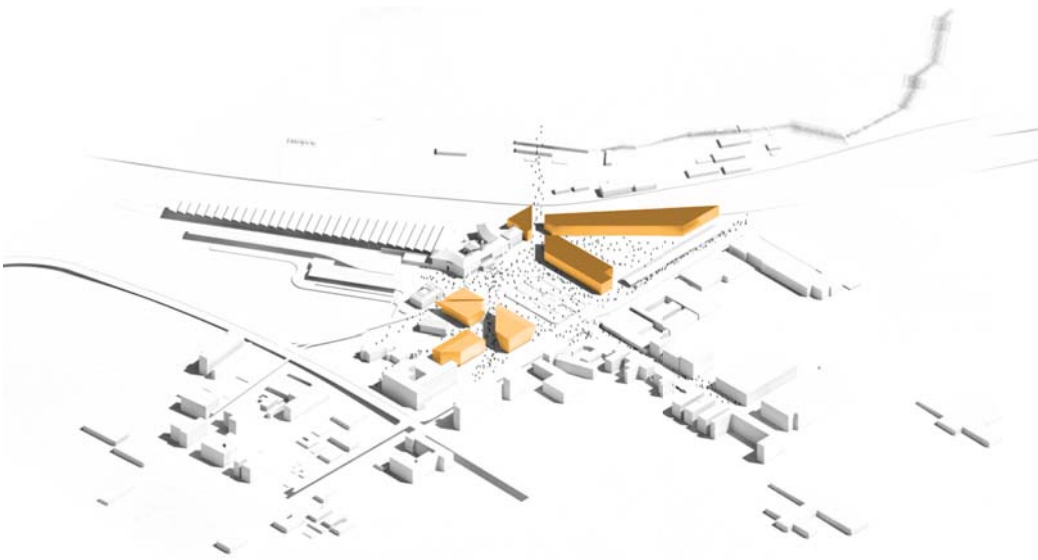


Figure 128. First spatial proposal for the site derived from rotated grid, pedestrian routes that connect to nodes and the creation of public civic places.

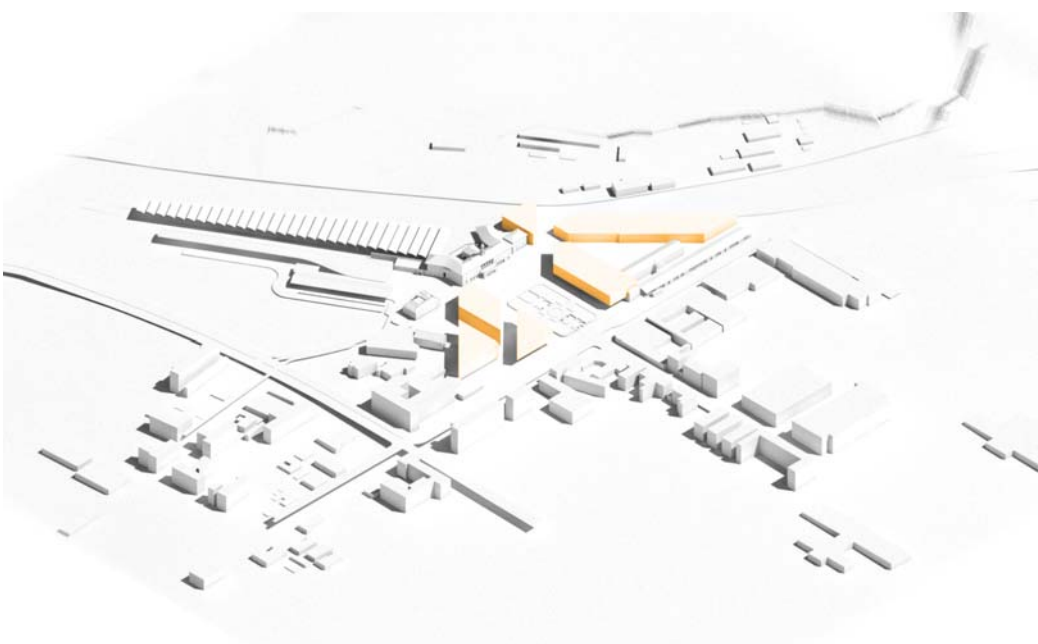


Figure 129. Building masses are further cut and distorted to create shaded routes and recessed active edges.



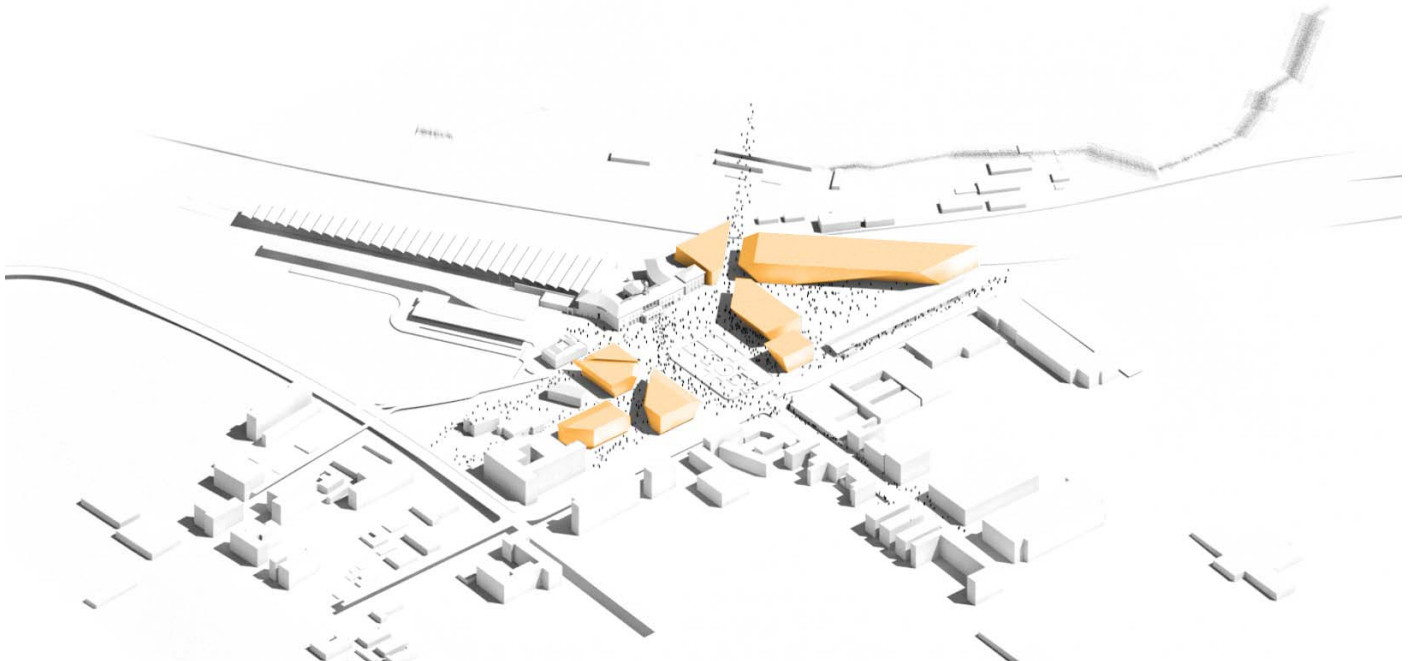


Figure 130. Buildings are seen as solid elements that are a part of the landscape. In this urban vision they have taken a faceted crystalline form which folds and is cut away so that people may engage with it. Here it is recognised that these forms should at points drop underneath the ground level so that the public may access roof and upper levels.

PEDESTRIANISING A SITE THAT IS FRAGMENTED BY ROADS.

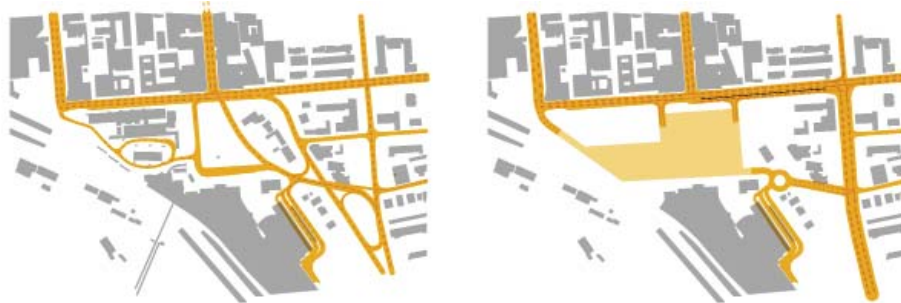


Figure 131. Existing roads create a chaotic web which isolates and creates unsafe uncomfortable environments for pedestrians.

Figure 132. A possible solution would be to simplify and consolidate the road networks and introduce a super basement parking level which allows the ground level to be truly public and pedestrian.

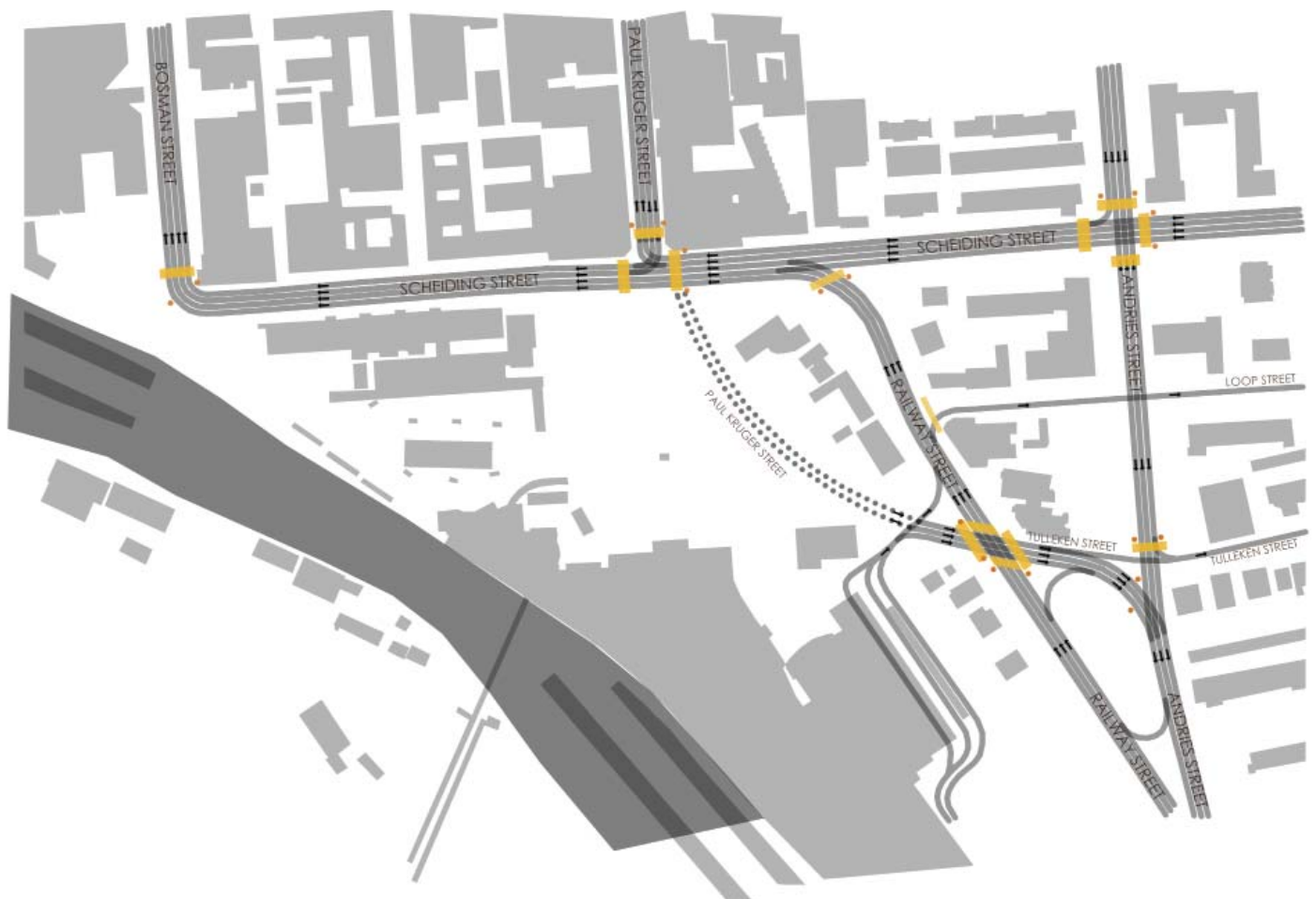


Figure 133. Existing road layout, notice that Paul Kruger street is closed and used as parking, it is therefore redundant to the general public and becomes dead space within the otherwise vibrant site.

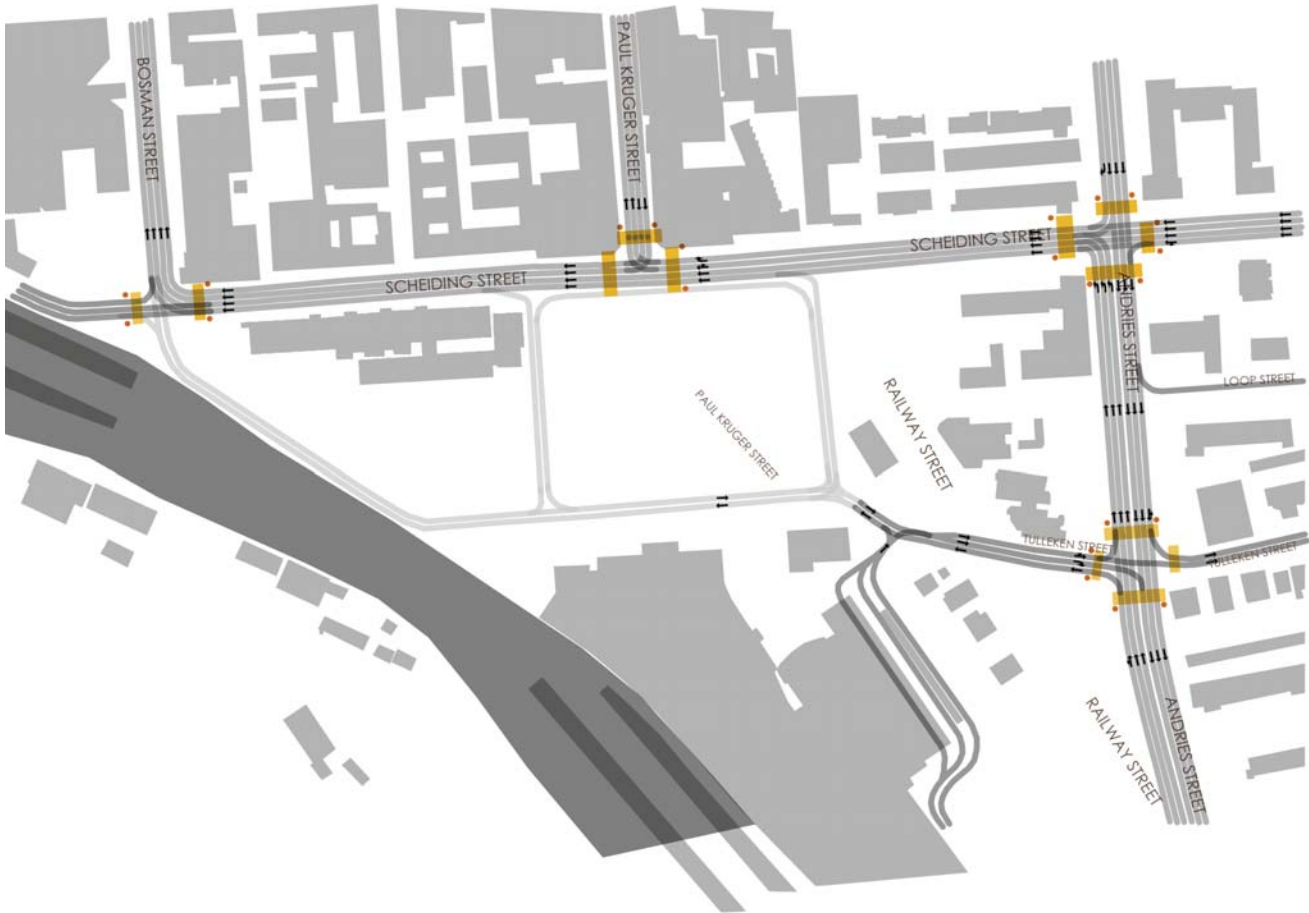


Figure 134. Final road layout Option A. The least invasive adjustment of road layouts merely drags Railway Street against Andries Street to create a pedestrian district around the Pretoria station. Light grey roads are underground access to parking.

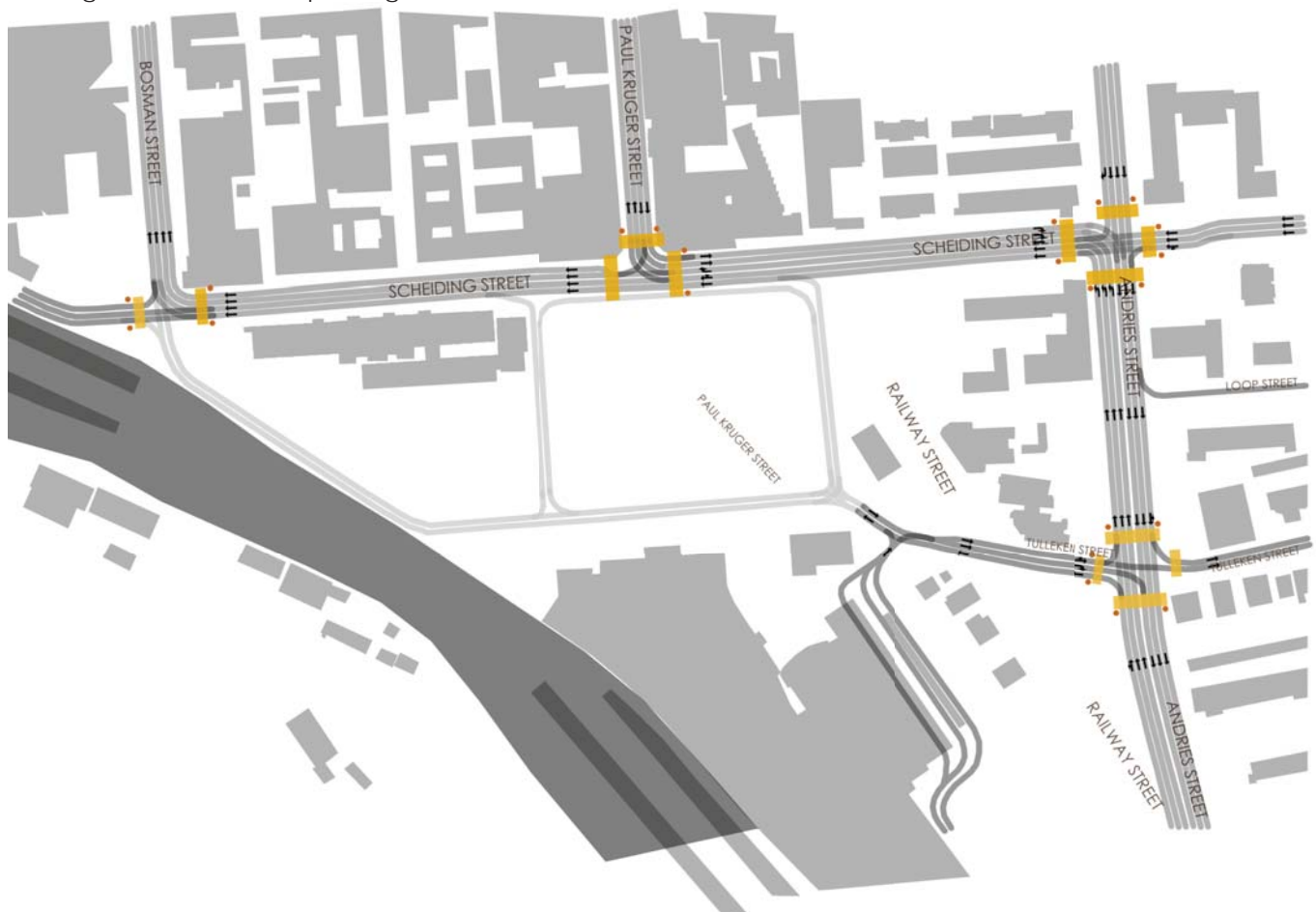


Figure 135. Final road layout Option B. Vehicular circulation is drastically improved by making Scheiding Street two way between Paul Kruger and Andries Streets allowing vehicles that use Paul Kruger to exit the city towards the South.



# PROGRAM

Daily users, residents and people who work nearby require amenities which provide them with basic services such as medical, security, communications, legal and state or administrative services and other necessities such as groceries, affordable eating and fast food spaces. For convenience, ATMs and public ablution facilities will also be provided.

It must be recognised that not all of these functions will or should be provided for in a single building but that they should rather be arranged appropriately across the entire civic space. This enforces the intended mixed use nature of the site as well as allowing for greater connections and networks between the various functions promoting dynamism and appropriation.

For this dissertation appropriate functions are positioned on site by considering the movements of people as well as the nature of the various nodes.

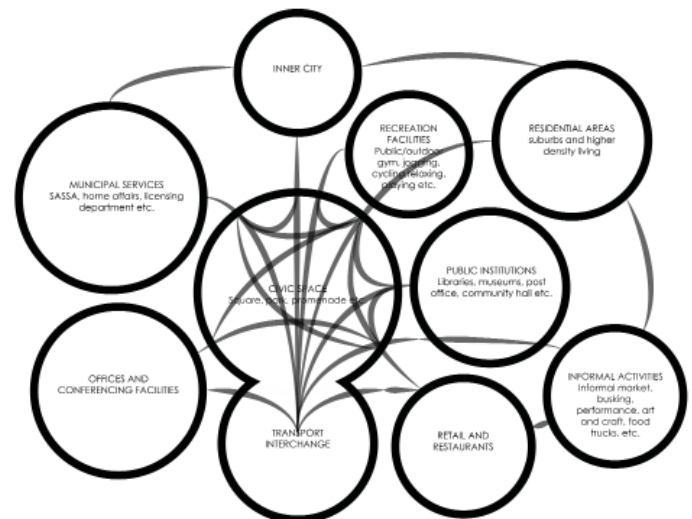


Figure 136. Bubble diagram indicating various functions to be hosted on the site.

These requirements will be provided for by the retail anchor, the informal market, fast food outlets and spaza shops. Users of the site can be better served with a more amenable public space where they may enjoy lunch, waiting or play. These activities can be provided for by the Station Gardens, a well-defined public square with soft edges which allow people to flow through them as their journey requires.

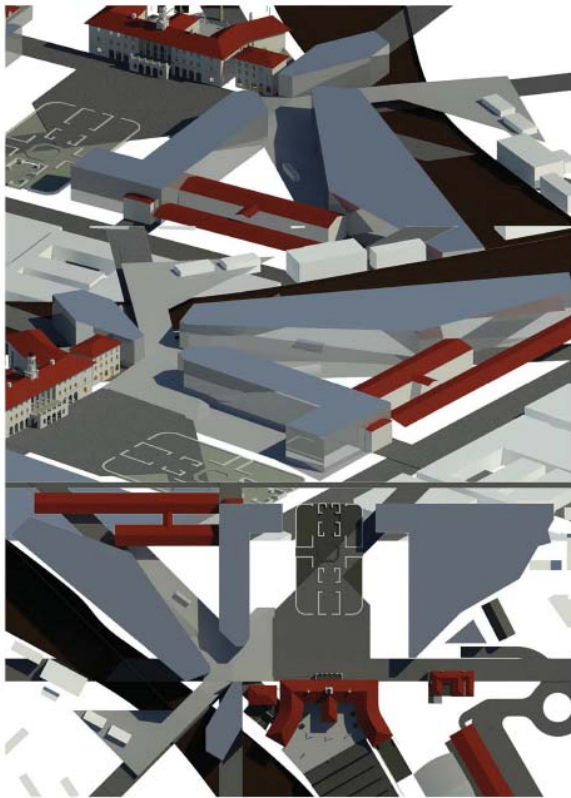
The site presently hosts a clinic with general practitioners, dentists and gynaecologists which are seen as a necessity and great convenience on a site that people use on a daily basis. The clinic is a valuable component that will be retained, although it would benefit the surrounding public space with a redesigned footprint which minimises the dead edges and negative fragmentation resulting in surrounding dead/neglected/leftover space.

Other opportunities involving the introduction of a shoe shop and hair salon to the site can be considered based on observations of urban Pretoria. On average the people who frequent the city do not have private vehicles and are reliant on their feet to navigate the city. Hair salons abound throughout the city and have become vibrant hubs or gathering spaces in themselves, where stories are exchanged and where someone may be beautified.

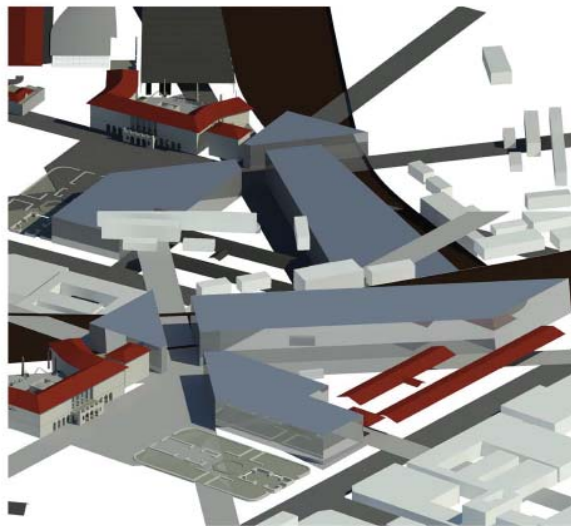
As the site serves a wide spectrum of income groups, wealthier citizens, visitors and tourists can be accommodated on the roof of the building with a specialised rooftop restaurant such as Co.Fi, Tribeca or Kauai. This is done so that the lower levels, where most activity takes place, remain accessible, inclusive and diverse. In this sense the functional layout of the building attempts to keep the majority of public edges, especially on the ground and first floors as inclusive and accessible as possible. Increasingly private or exclusive activities and functions are therefore moved to higher levels or behind functions and features with public interfaces.



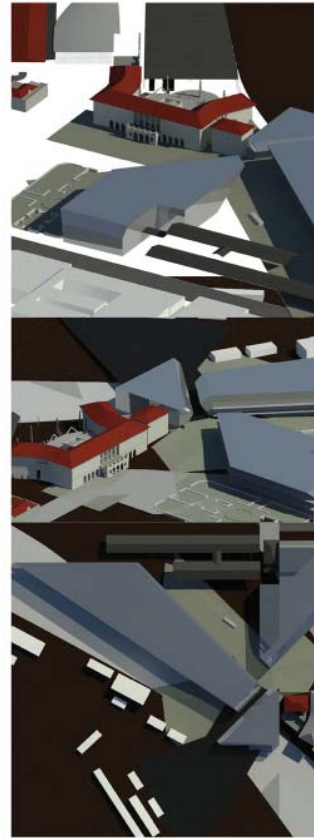
# DESIGN DEVELOPMENT



INTUITIVE RESPONSE

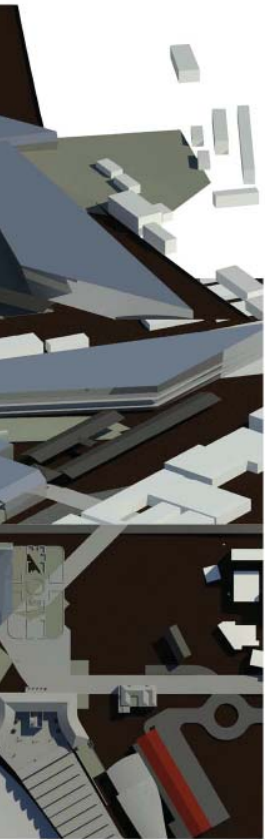


URBAN GRID AND NATURAL BOUNDARY IS CONSIDERED

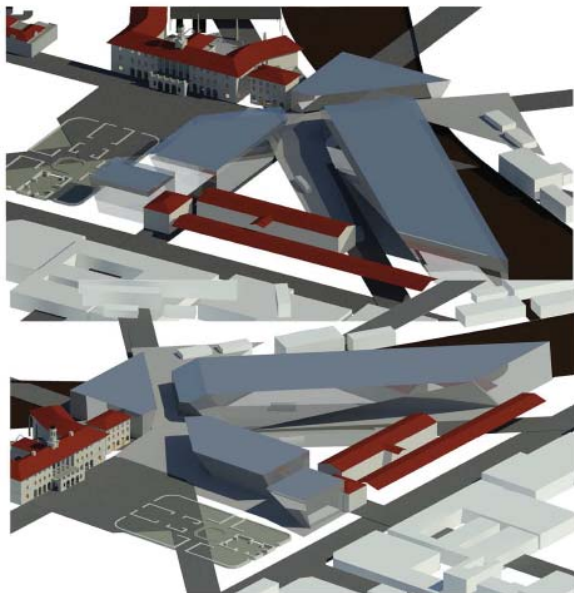


SOFTENED EDGES ARE INTRODUCED CO

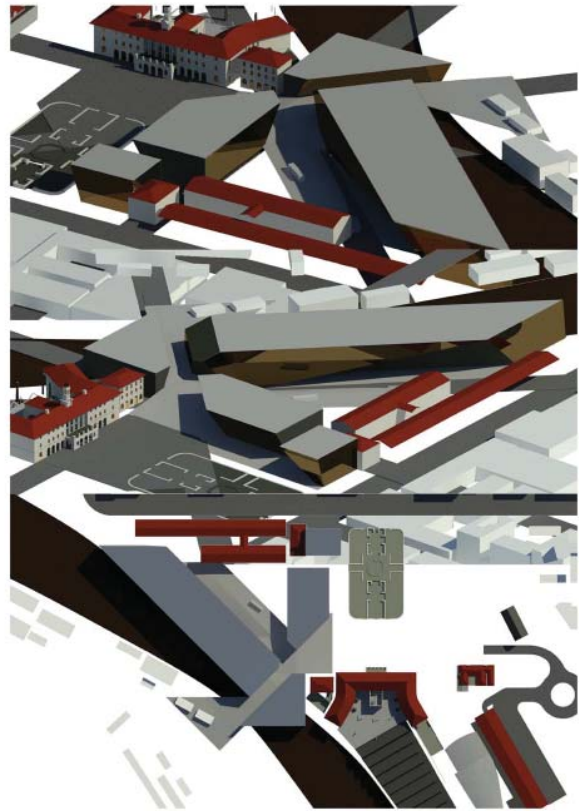




CONSIDERING OPEN OR ENCLOSED



PEDESTRIAN FLOW HAS IMPACT ON CONFIGURATION



MATERIAL, REFLECTIVITY, COLOUR

Figure 138.

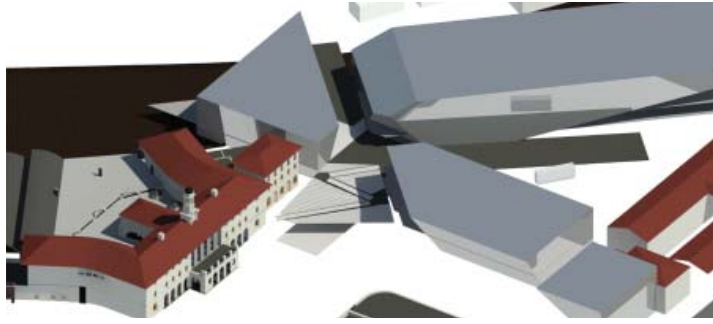


Figure 139. Image showing basic forms which developed from the rotated grid and pedestrian routes cutting into the extruded building footprints.



Fig. 140.

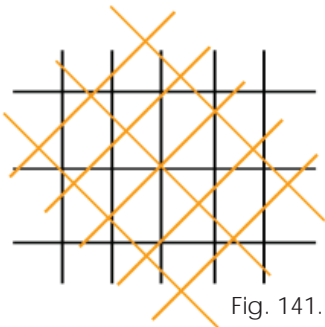


Fig. 141.

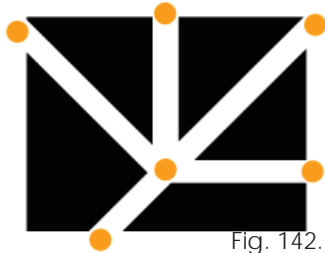


Fig. 142.

Initial design emphasis was placed on the position and orientation of the building, so that it could create:

Firstly: A well defined civic space around the Station Gardens see Fig. 139.

Secondly: A response to the existing urban grid running north south and east west see Fig. 140.

Thirdly: A framing device for routes and axis that connect various nodes see Fig. 141.

The pedestrian bridge connecting to Salvokop was redesigned so that it would no longer be a dividing boundary on the site creating dead space. Instead a raised platform and focal point or ‘Civic Knot’ from which direct routes to the various nodes could be created with landscaped green spaces leading up to it.

In order to improve the site legibility a rotated grid of 45° was used which could respond to the pedestrian routes, the awkward angle of the railway lines and the existing urban grid, justified by the Pretoria Station. The ‘Civic Knot’ will be a raised square which provides views of the activity in the formal ‘civic square’ around the station gardens to the east and the informal market square to the west. It becomes a new node with entrances to the municipal and civic functions through portals surrounded by cafés, restaurants and shops.

To make the site as accessible as possible a folded landscape was envisioned which would allow for freedom of movement and appropriation. This landscape takes the form of raised walkways and platforms which connect to public programs and activities, or become promenades from which to view and observe city life.

The focus of the design is the ‘Civic Knot’ and the building directly to the North thereof, which in turn, becomes a porous divide between the formal civic square on the East and the informal market square on the West. Vertical circulation to the upper two levels are focused around two cores at the southern and northern ends whilst access to parking in the basement is located in the centre. These movement cores are completely public, connecting the ground floor level with the ‘Civic Knot’ and upper restaurant and office level on the South. The building will straddle the two circulation cores with public walkways onto which the restaurants will spill and from which the spectacle of urban life can be experienced.

This artificial landscape is manipulated to suite the daily needs of citizens and commuters to provide them with a useable and fertile platform from which they can live and engage with their community.

The structure is stereotomic in order to be robust and create a sense of permanence within the dynamic site whilst canopies and raised walkways are tectonic in parts. The stereotomic structure will be built of off-shutter concrete and supports roof gardens, walkways, floors and canopies the robustness of the material can withstand heavy use. Where pedestrians can move underneath the building between the national bus terminal and the Pretoria Station, it is essential that the space is well lit and spacious. In order to achieve this, the tectonic walkways and shading cut into the form above and allow light to penetrate the space. The Tectonic shading devices are made from coloured ETFE membranes which were initially conceived as separate elements supported by timber trusses. After various iterations it was discovered that these membranes could be supported by the concrete frame which simplified the design. These shading devices flow in and out of the stereotomic form to provide shading over the walkways that surround the building and then extend over the market area where it also drops down to the pedestrian scale.

As discussed in the programs section, a major influence on the spatial layout was the movement routes that were mapped between the various nodes across the site. This gave an indication for the positioning and shape of building footprints which would increase pedestrian contact with active edges.

The building footprint began as a basic rectangular outline which was then cut diagonally by the rotated grid centered on the threshold of the Salvokop bridge at the station precinct. Furthermore pedestrian routes were manipulated to respond to the diagonals of the grid in conjunction with the locations of the nodes between which they moved, these routes were also allowed to cut away from the initial rectangular footprint resulting figure 143. These basic building outlines were then further manipulated to start accomodating the various functions and active edges see figure 144.

At this stage, the urban grids and structural framework was the primary influence of the building layout. The forced fitting of these functions to an existing grid recreated the issues of fragmentation and illegibility existing on the site today. The tensions between the functions, useability and existing fabric needed to be addressed.

In order to achieve this, focus was shifted from the urban and structural grid as a primary design influence, to the building skin and edge. This made it possible for programmes and activated routes to weave through the existing and the rigid, structural grids began to enable activities rather than deleniate them see figure 145.

Thus the frame which developed into a portal frame was relegated to an aesthetic element and although the building skin is supported by this portal frame, it is the skin which supports the usefulness of the building. The robust, rigid and monumental substrate frame became representation of country's past, supporting and covered by the lighter weight more dynamic materials (Aluminium louvres, ETFE membranes and IBR sheeting) which are emblematic of South African society which is able to adapt and appropriate.

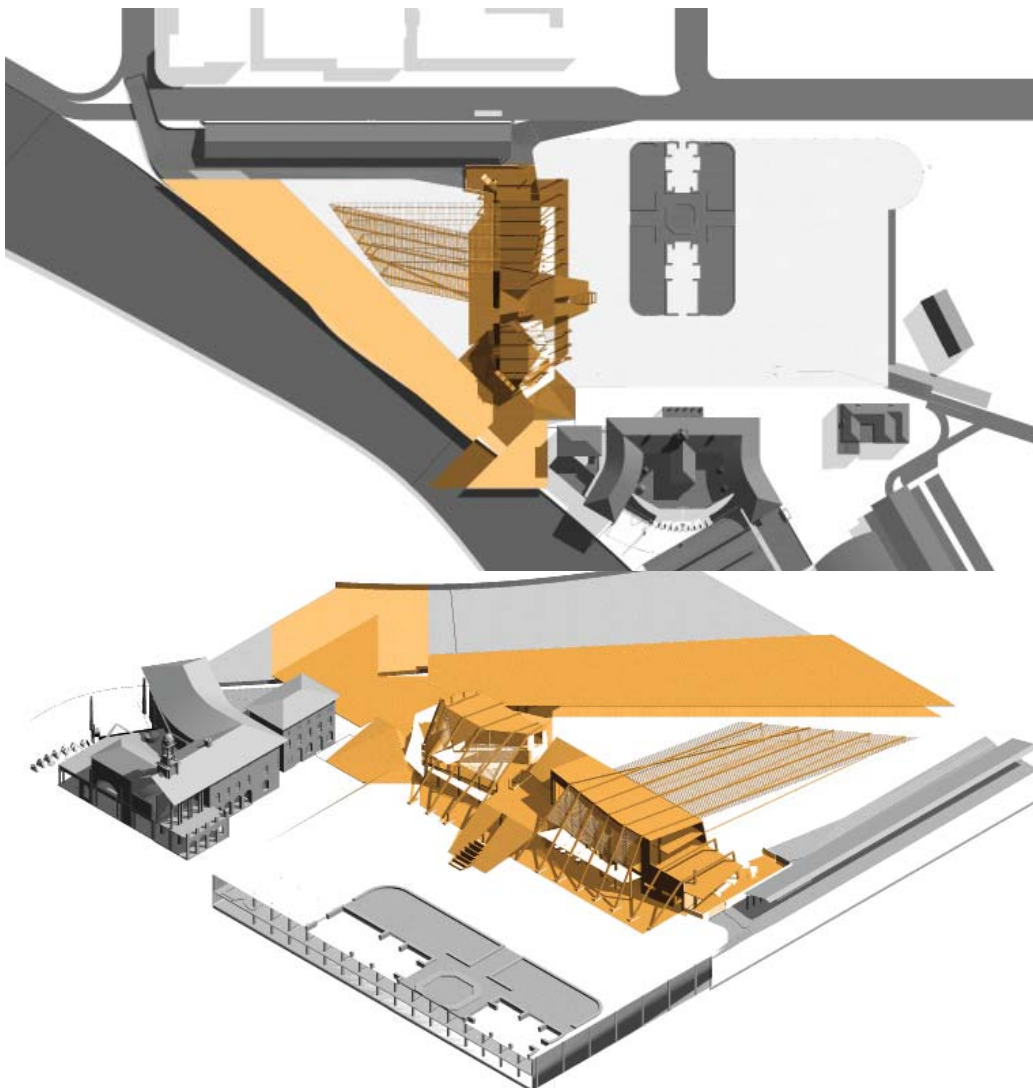


Figure 143-144. It was decided that the building seperating the formal station gardens to the West from the informal market square to the East would be an appropriate focus for the dissertation. It will encourage interaction between the two areas as well as define the station gardens as a formal public, civic square.



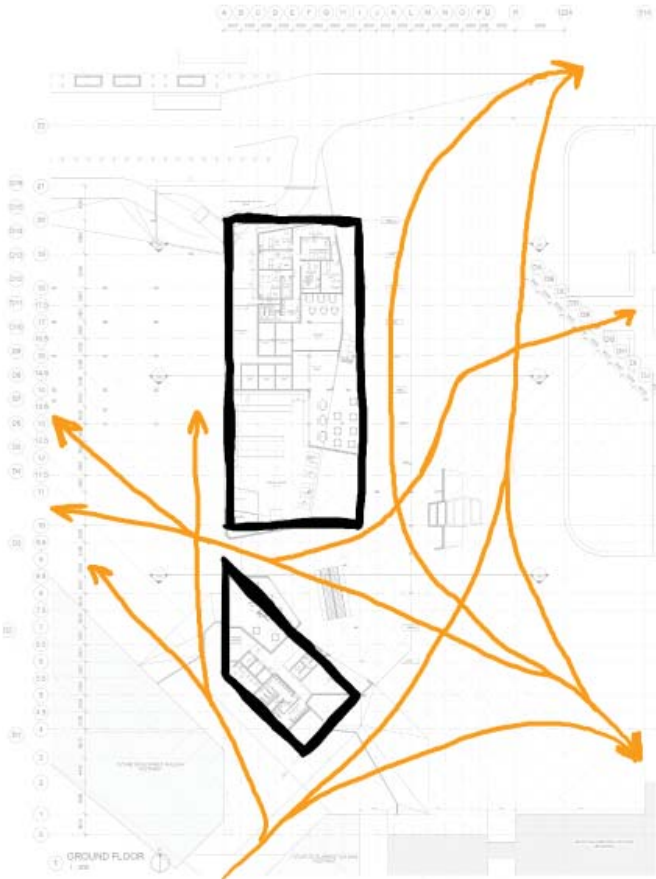


Figure 145.

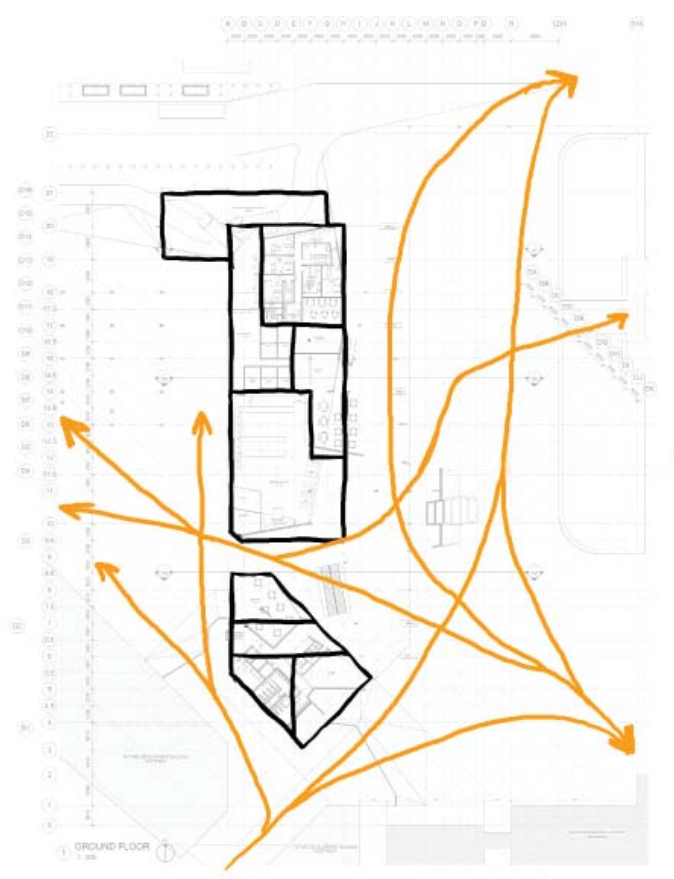


Figure 146.

Work began on determining the building form which would accommodate activities that spilled out onto pedestrian routes. Overhangs, arcades and colonnades were explored as possible devices that could provide appropriate activated spaces for people to move through (See figure 146-147).

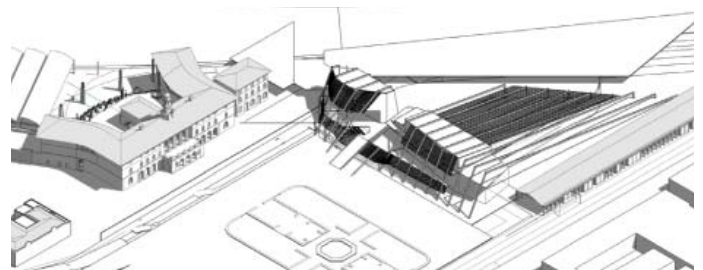


Figure 147.



Figure 148.

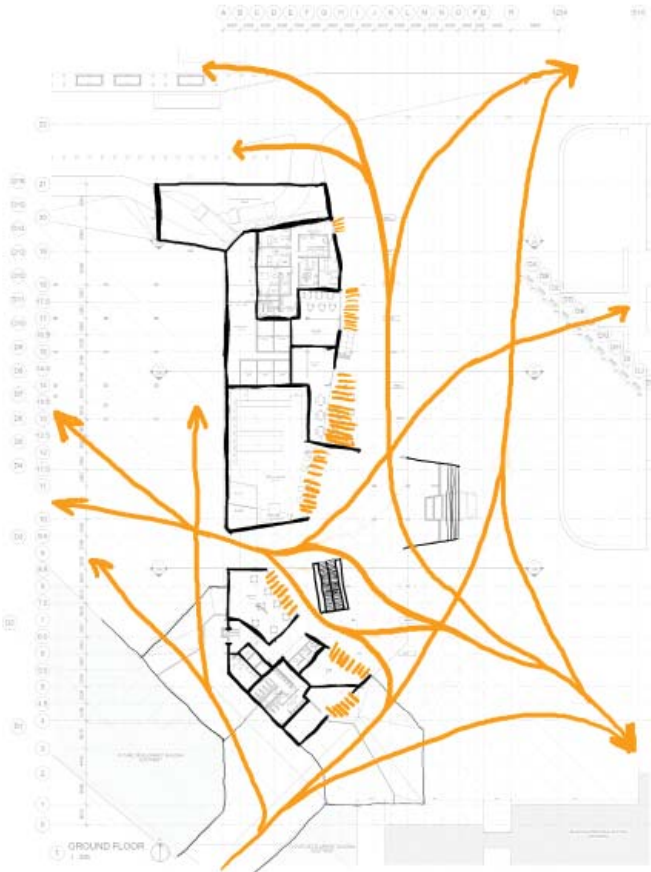


Figure 149.

A structural frame was conceived as a means to support and delineate the allocation of different functions within the building, it was simultaneously used as an aesthetic element that would allow for incremental changes along a rigid pattern (see figure 148-150). Although further consideration and design development became focused on the skin which supports, protects and defines the activities and urban life surrounding it.

The complexity of urban life around the Pretoria Station resulted in an increasingly complex building design see figure 148-150. The emphasis of incorrect tectonic or stereotomic elements resulted in a building that resembles the haphazard and fragmented state of the site which was exactly what the design attempted to avoid.

Therefore design began afresh so that a more holistic form and arrangement of functions could be achieved as well as a refined portal frame which could host the skin without being in direct conflict with it see figure 151 and 152.

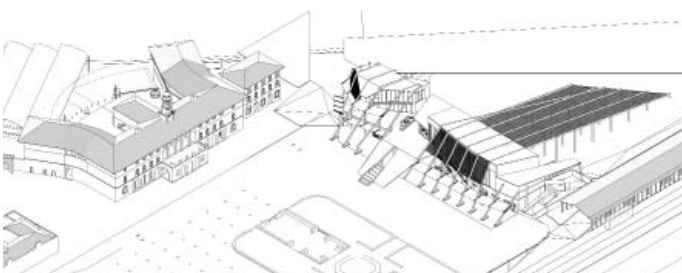


Figure 150.

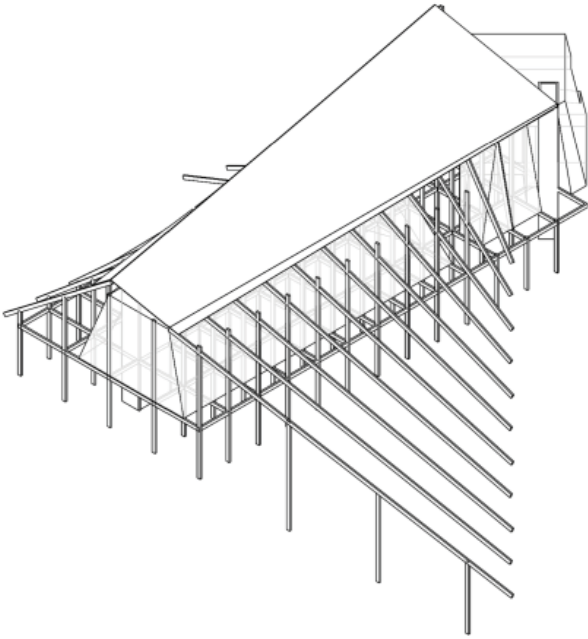


Figure 151.

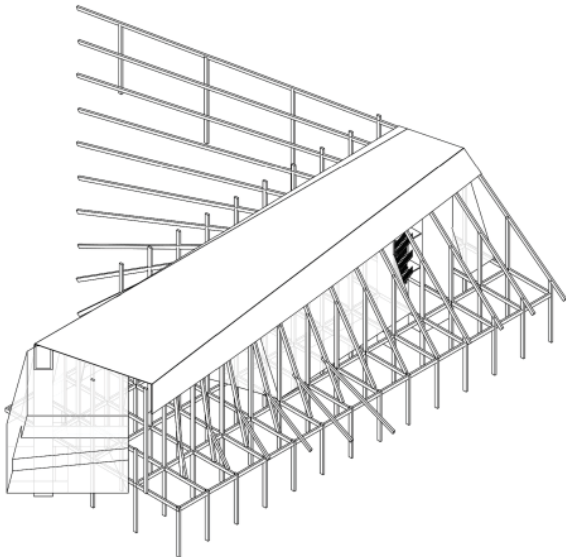


Figure 152.

Through the various iterations, it was discovered that the use of a semi-detached building skin could become a useful tool to carry, cover and contain the dynamic nature of programmes, activities and life which occurs around it as depicted in figures 153 and 154.





The concrete portal frame had to be part of the existing urban condition yet accommodate the proposed functions and activities. The existing condition of the site is defined as fragmented, with the disparate elements of the Pretoria Station representing the past, the inner city representing the present and the Gautrain Station representing the future.

The vision of the future encapsulated by the Gautrain is seen as problematic since it advances the trends of isolation resulting from classism and financial exclusion. The design, cold white and blue, steel and glass hardly responds to the existing Herbert Baker Station and although it appears safe and clean, it also appears sterile and static.

The proposal needed to address these disparate paradigms by appropriating something from each. The Pretoria Station as the focal point is a static and authoritarian structure, a reminder of an oppressive past. The proposed design responds by allowing the skin to fold back revealing the underlying portal frame and building form below which is more enclosed, vertical and solid. Towards the city the building gradually becomes more horizontal, open and complex. The skin becomes a dynamic series of surfaces which drops down to a more human scale defining and protecting the spaces and activities below.

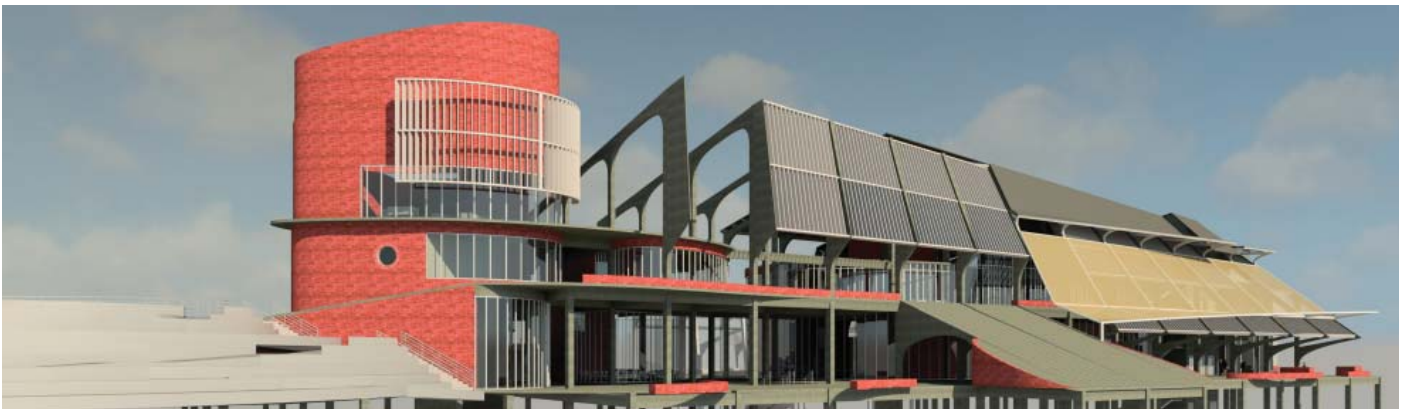
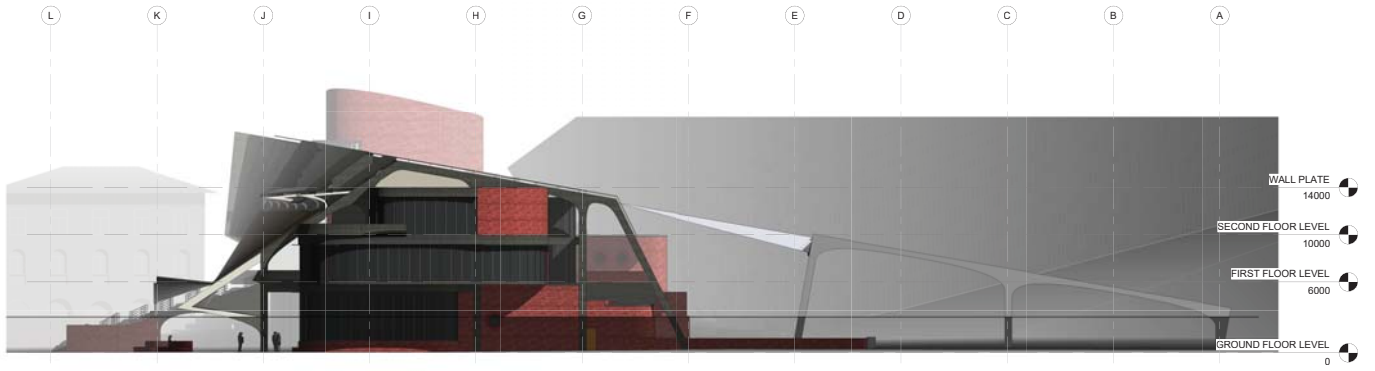


Figure 153.



Figure 154.

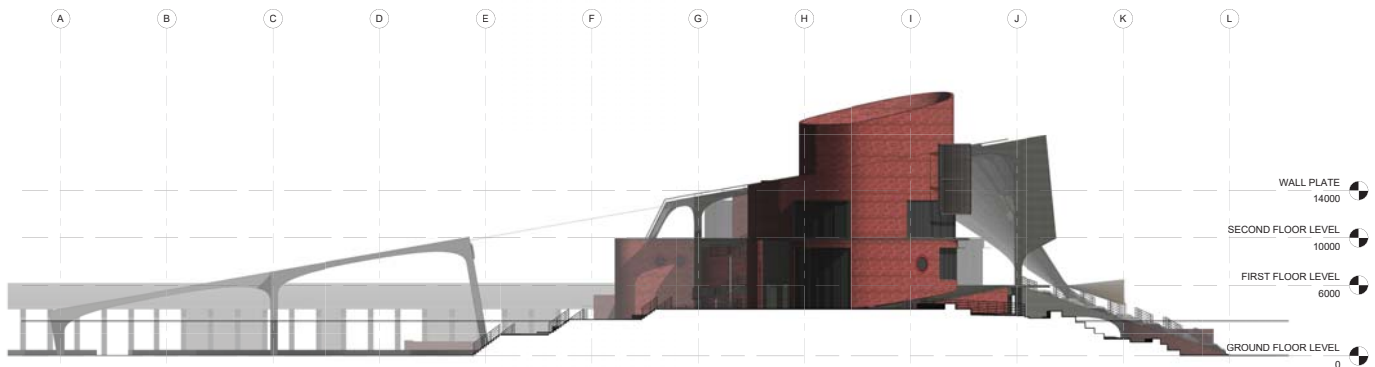
# INITIAL DESIGN



NORTH



EAST



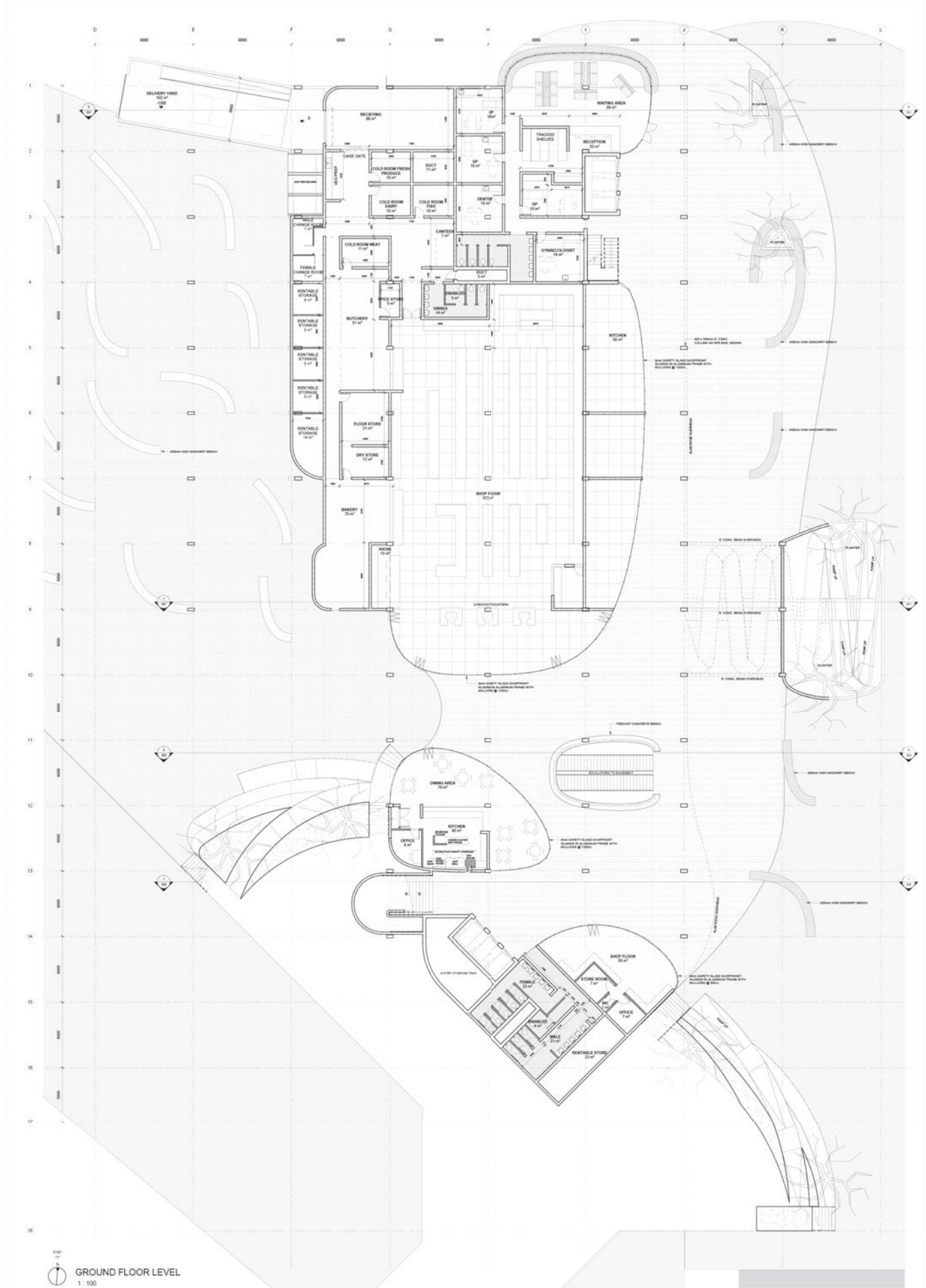
SOUTH



WEST







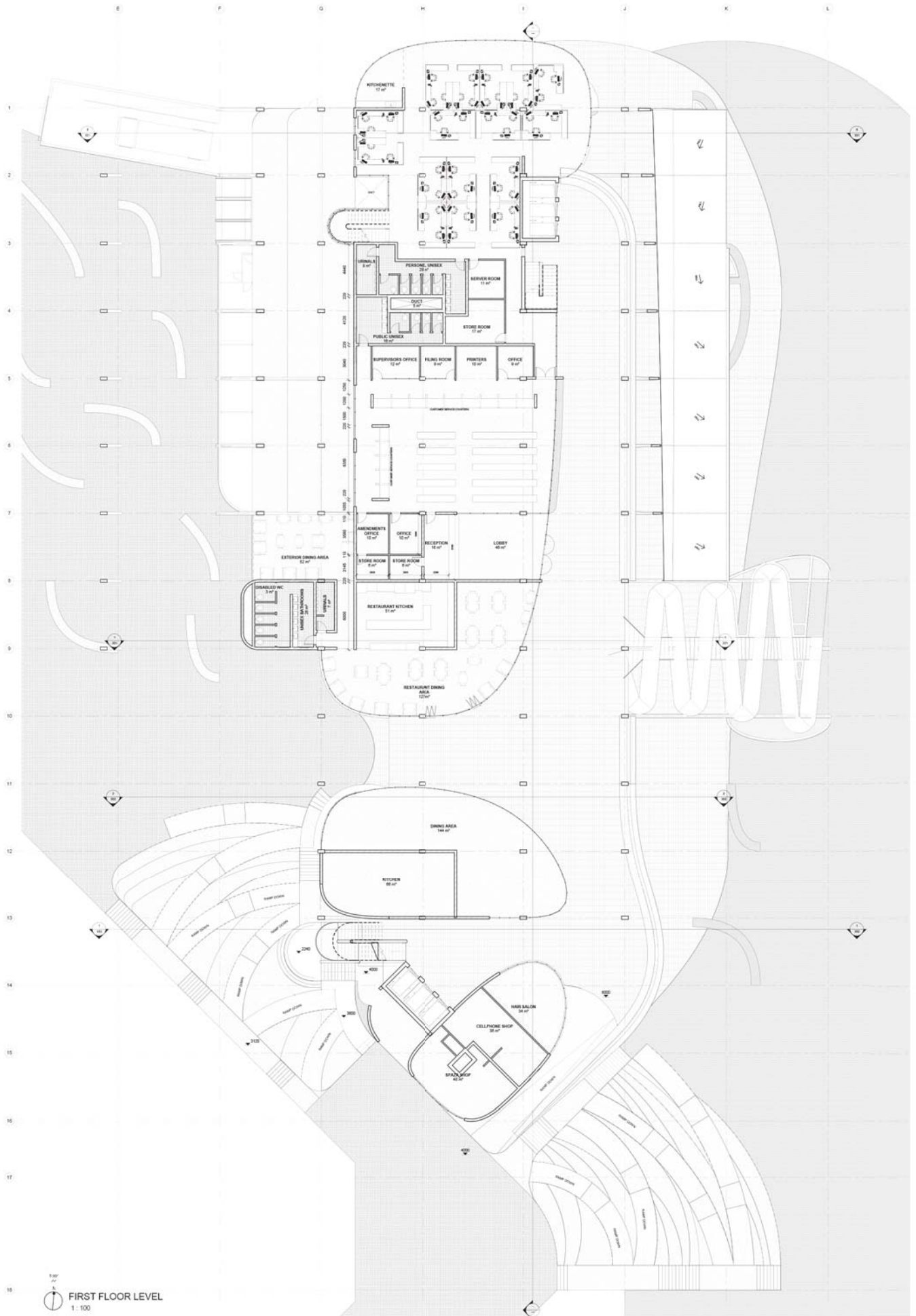
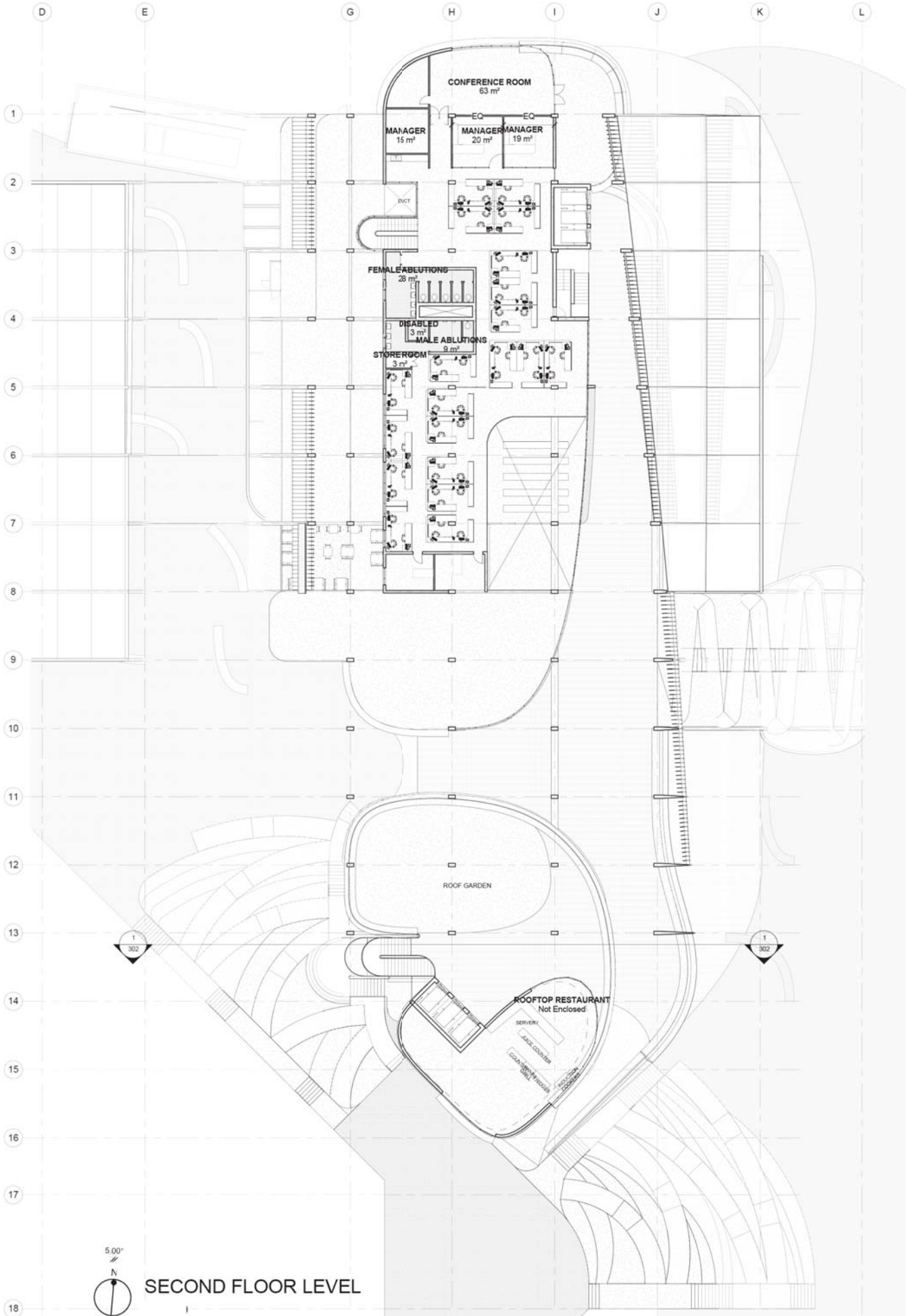


Figure 158.



SECOND FLOOR LEVEL

Figure 159.



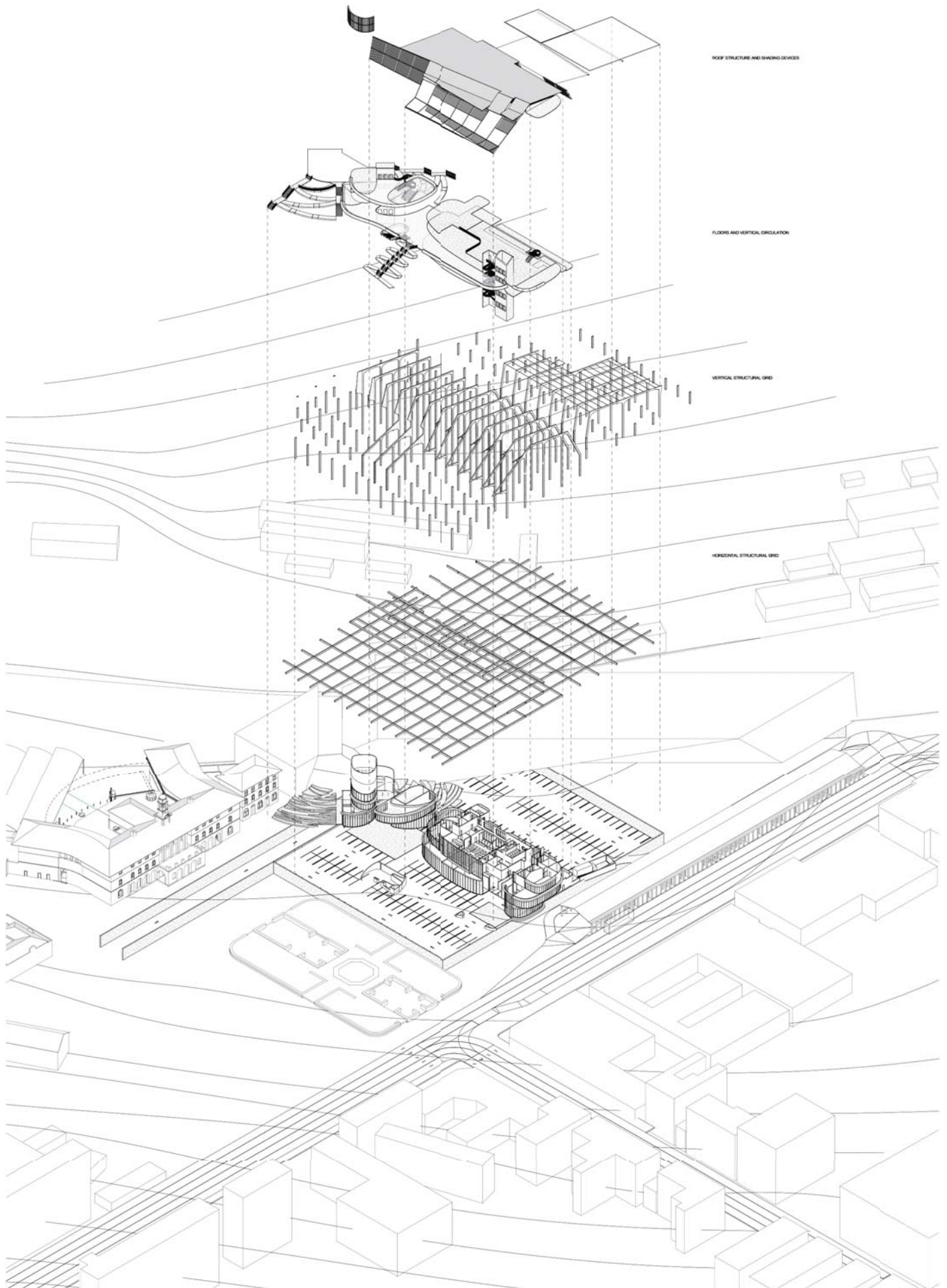


Figure 160.

MATERIALS

Coulored ETFE film

ETFE is a durable, transparent and lightweight film. It can be printed with a frit pattern which aides with solar control.

The light weight and packability of the material reduces transportation costs and carbon footprint, the material is recyclable.



The Serpentine Gallery of 2015 by SelgasCano celebrates movement, colour, lightness and nature (<http://wineforspicewarneredwards.blogspot.co.za/>)

Custom Timber Trusses

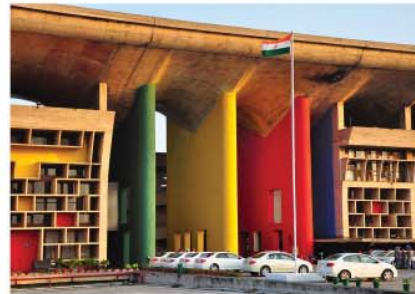
Custom built solid timber trusses will be used to support the ETFE film. Timber will be locally sourced.



The trusses of the Chapel and joint details by Dawid Krynauw are crafted so that structural elements can become an exposed feature (images from [www.davidkrynauw.com](http://www.davidkrynauw.com)).

Fair Faced Concrete

The high traffic on the site demands a robust, low maintenance mater will stand the test of time. Fair faced concrete is therefore ideal.



The Palace of Justice in Chandigarh by Le Corbusier was built in 1952, the off-shu concrete has remained untouched for 65 years and still adds to the character building. (Image from: [www.wordpress.com](http://www.wordpress.com))

Glazing

A low-E glazing will be used since the building has a very long Easterne facade. The structure will sit on the interior so that the xternal surface remain smooth and continuous.



The Oslo Opera House by Snohetta successfully employs this system to create a continuous surface which reflects the surrounding landscape (Image from [bagienny.info](http://bagienny.info)).

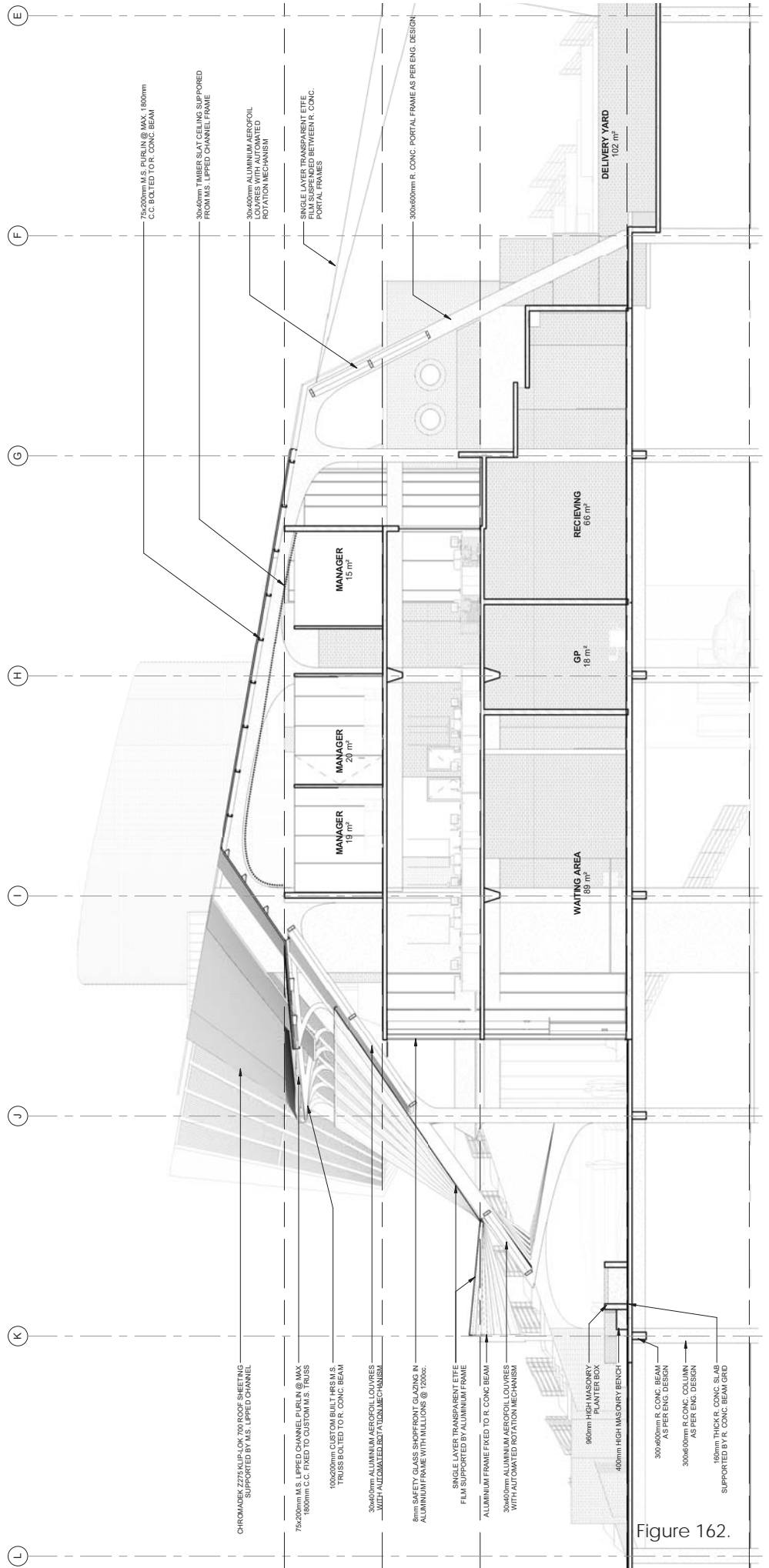


Figure 162.



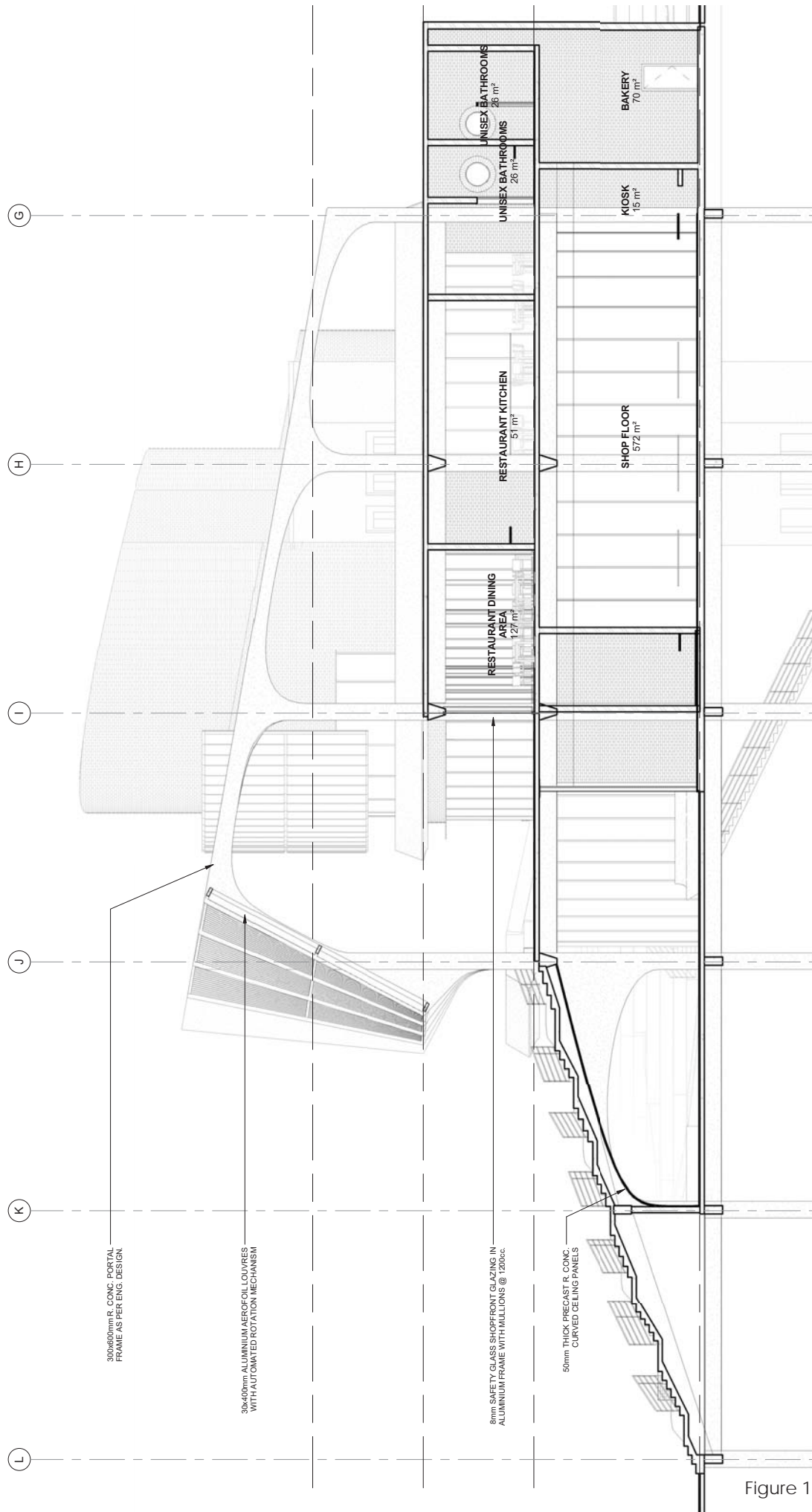
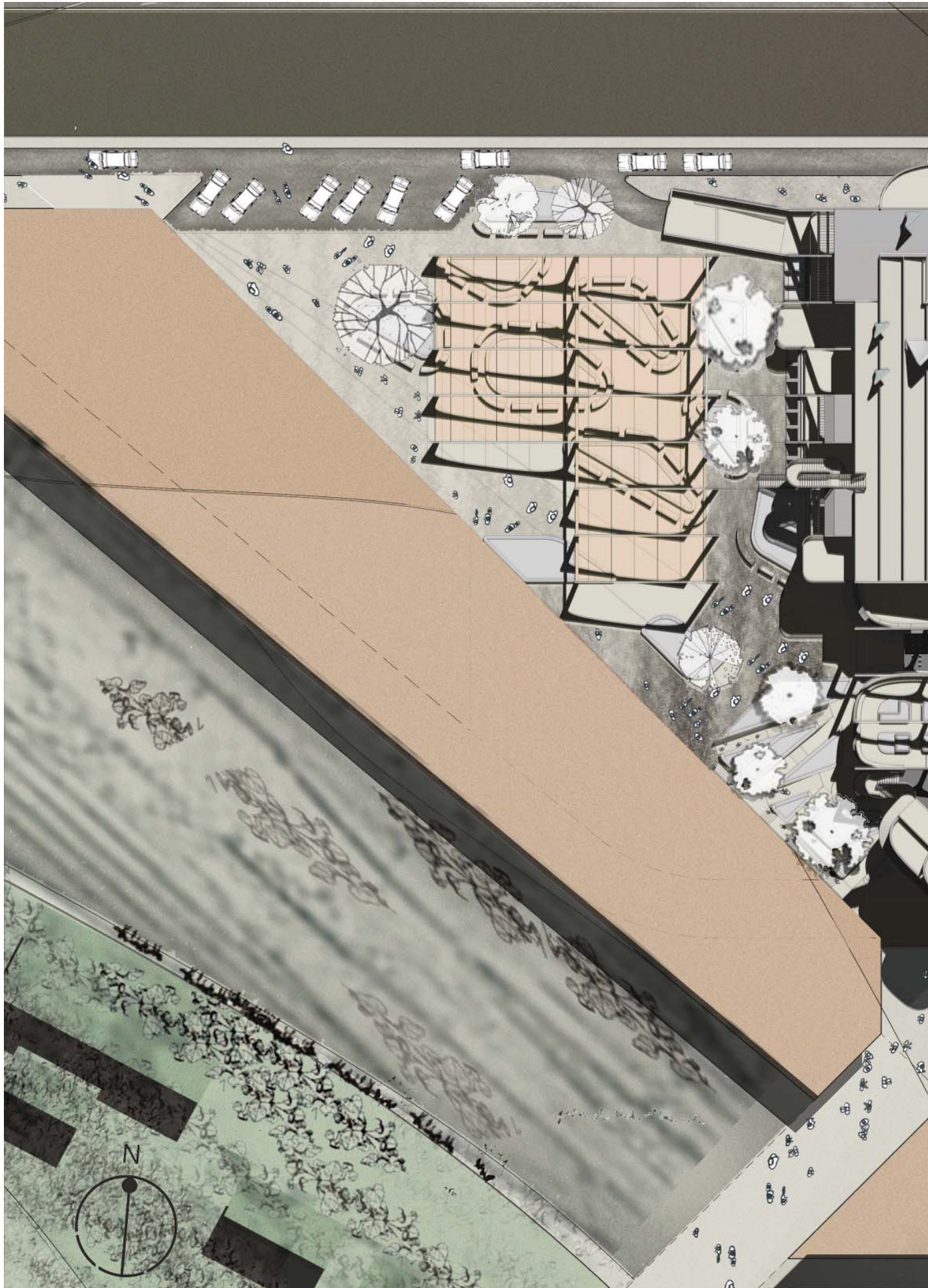


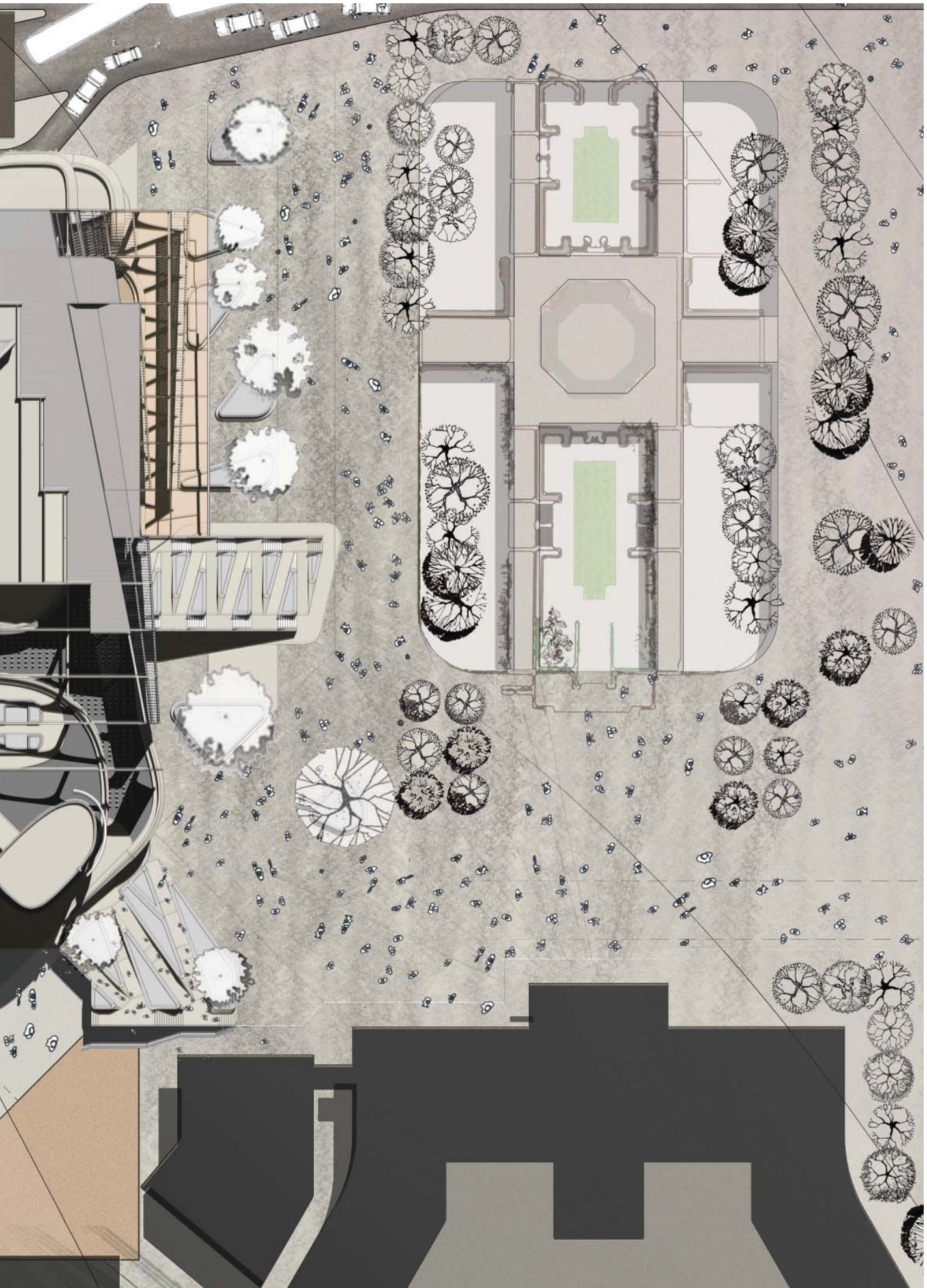
Figure 163.

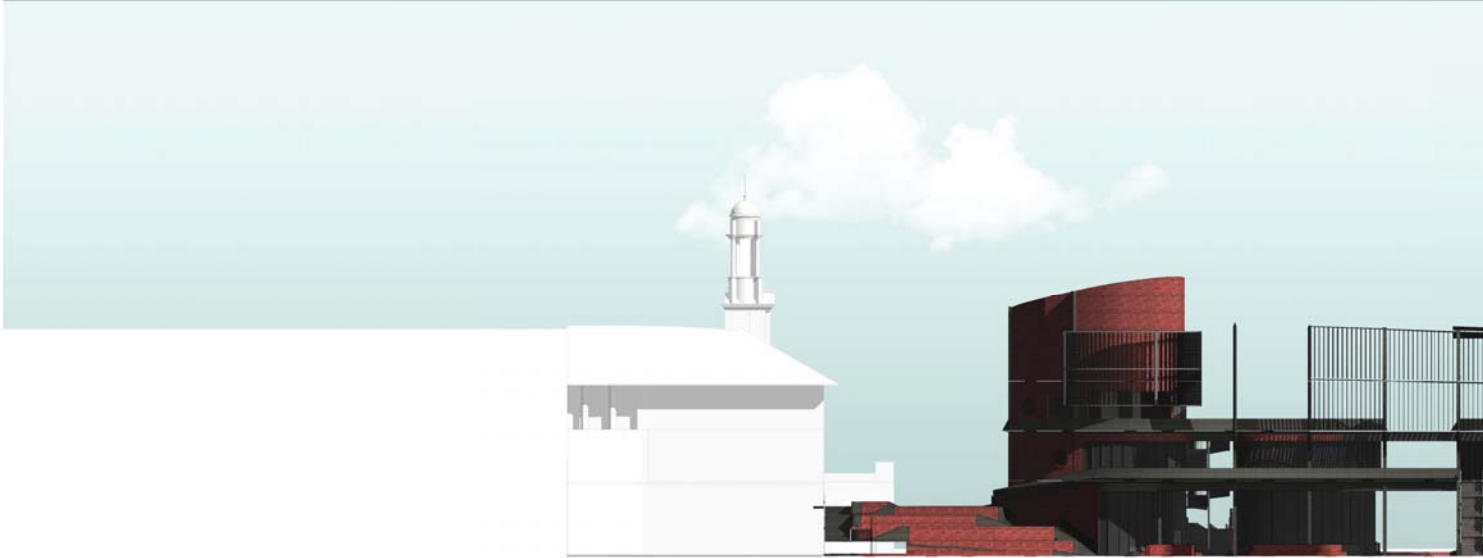
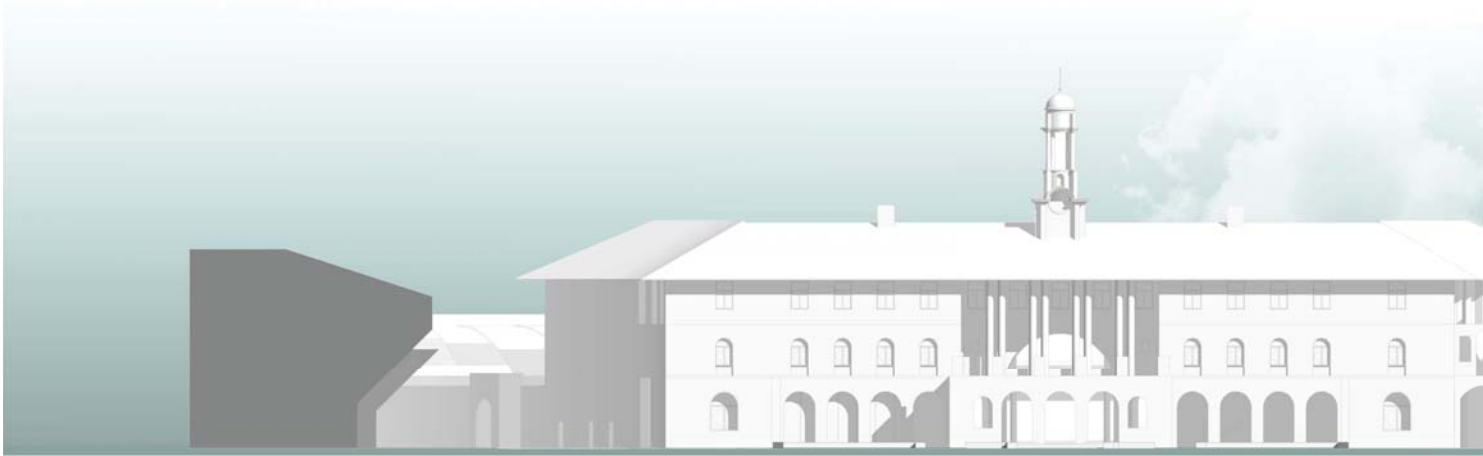


# FINAL DESIGN AND TECHNIFICATION

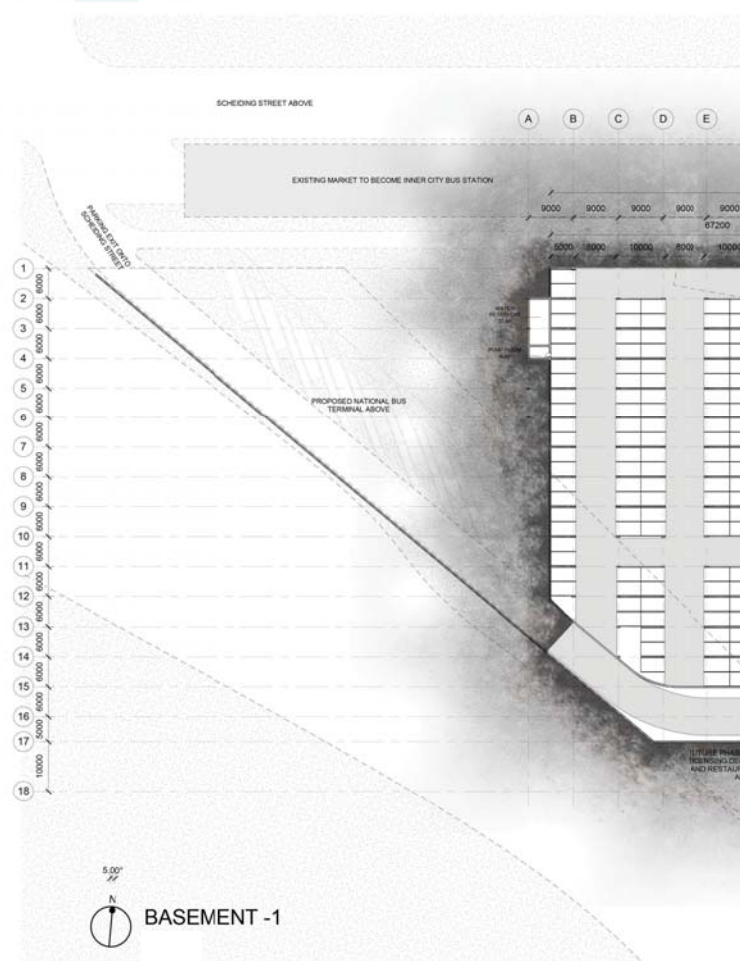








EAST







NORTH

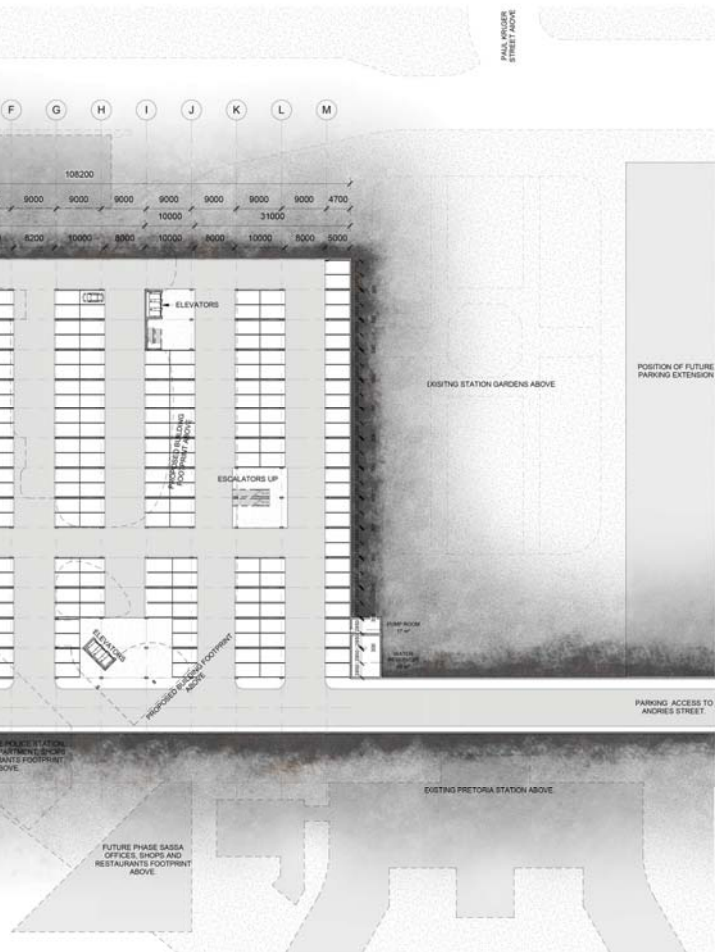
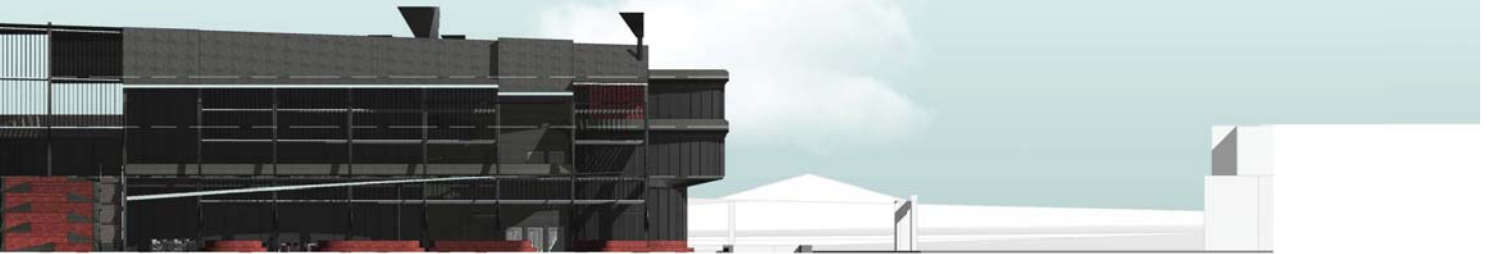


Figure 165.



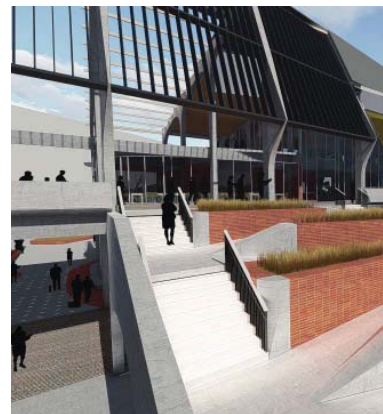
UPPER CONCOURSE ALONG THE DEPARTMENT OF HOME AFFAIRS



BUILDING THRESHOLD STRETCHING



ARRIVING AT THE SITE FROM SALVOKOP PEDESTRIAN BRIDGE



STRAMP CONNECTING THE CIVIL

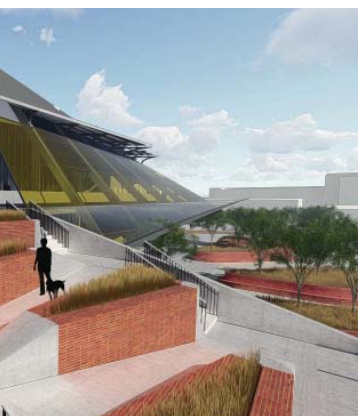
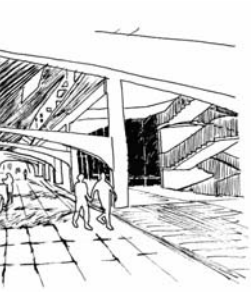
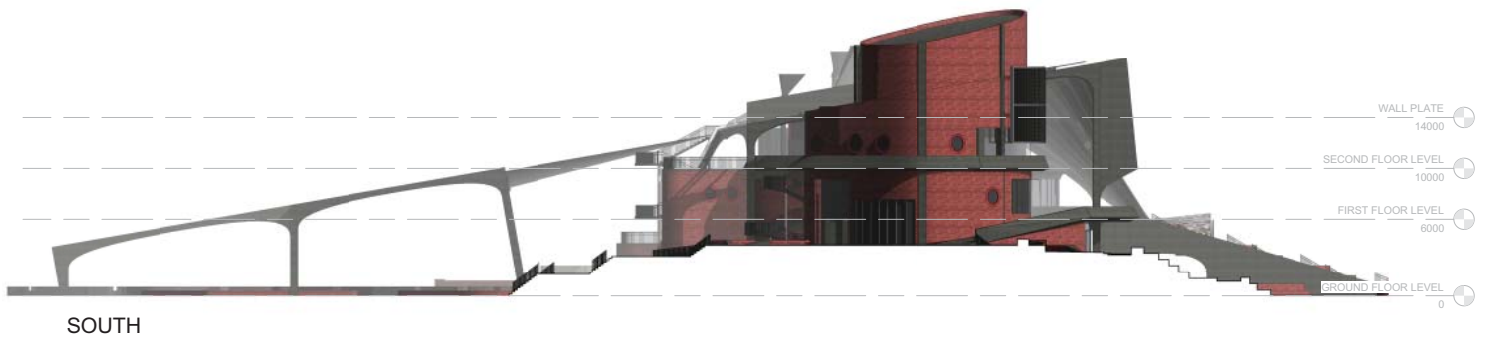
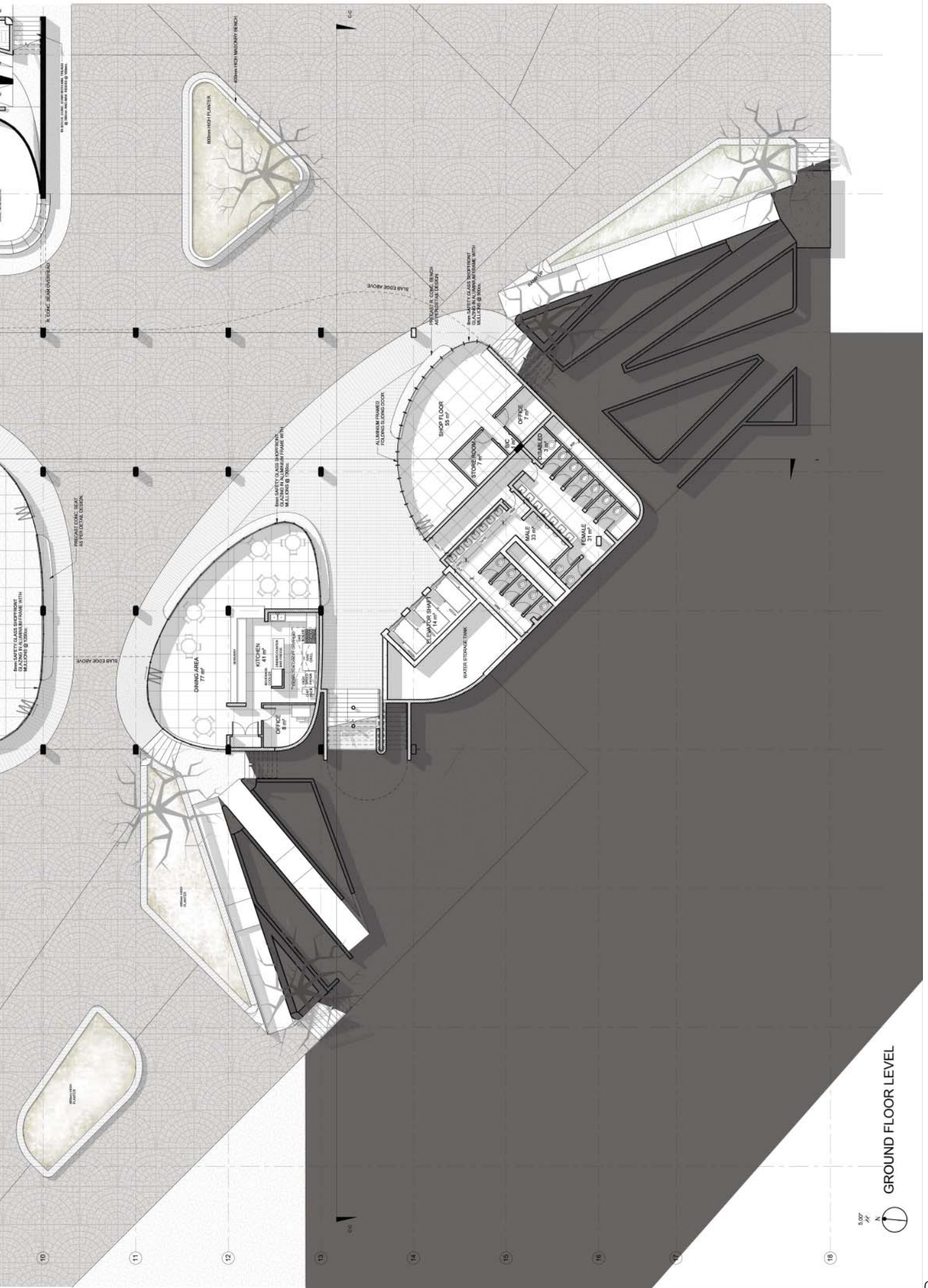


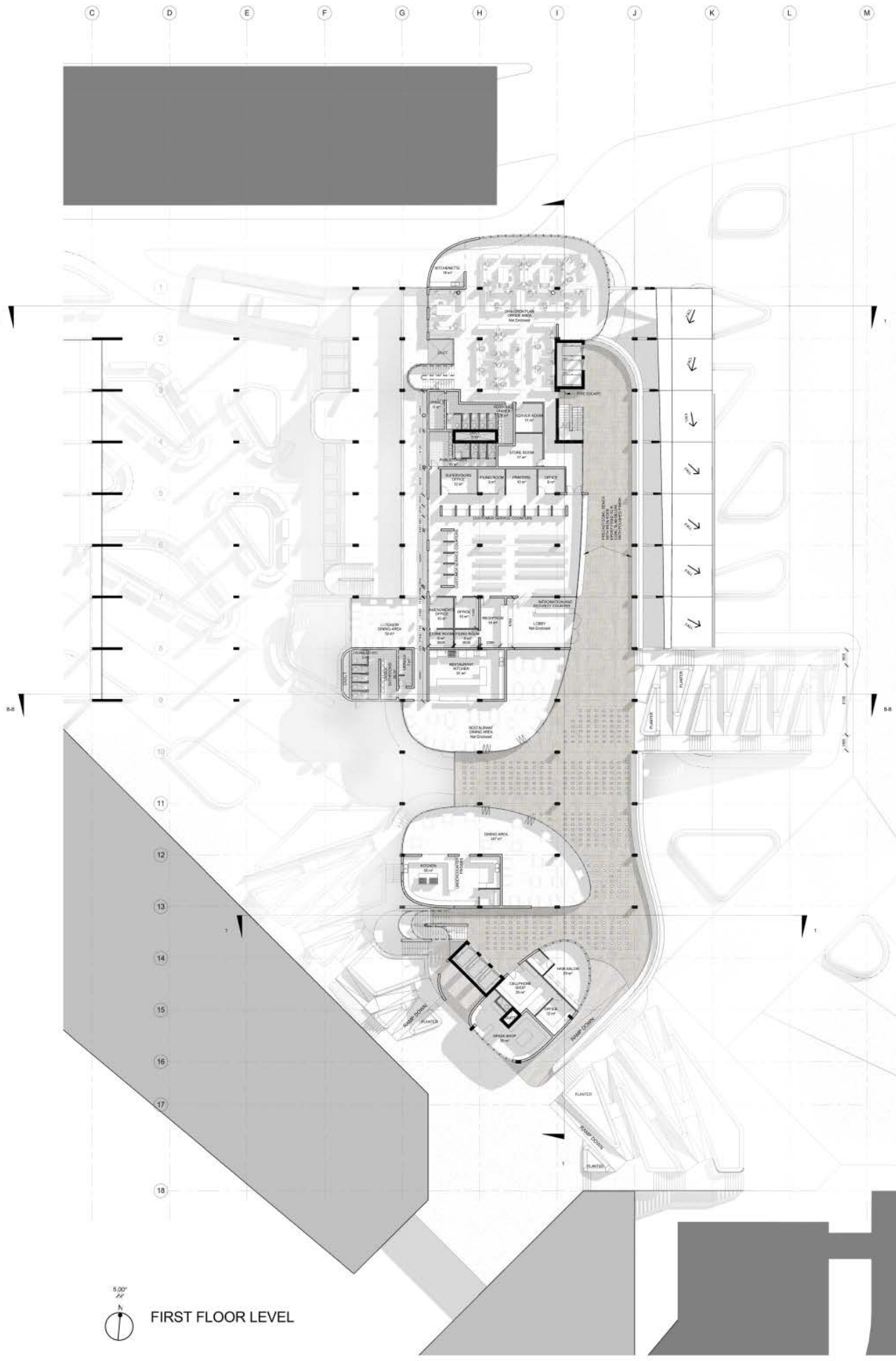
Figure 166.











5.00m  
5.00m  
N  
FIRST FLOOR LEVEL

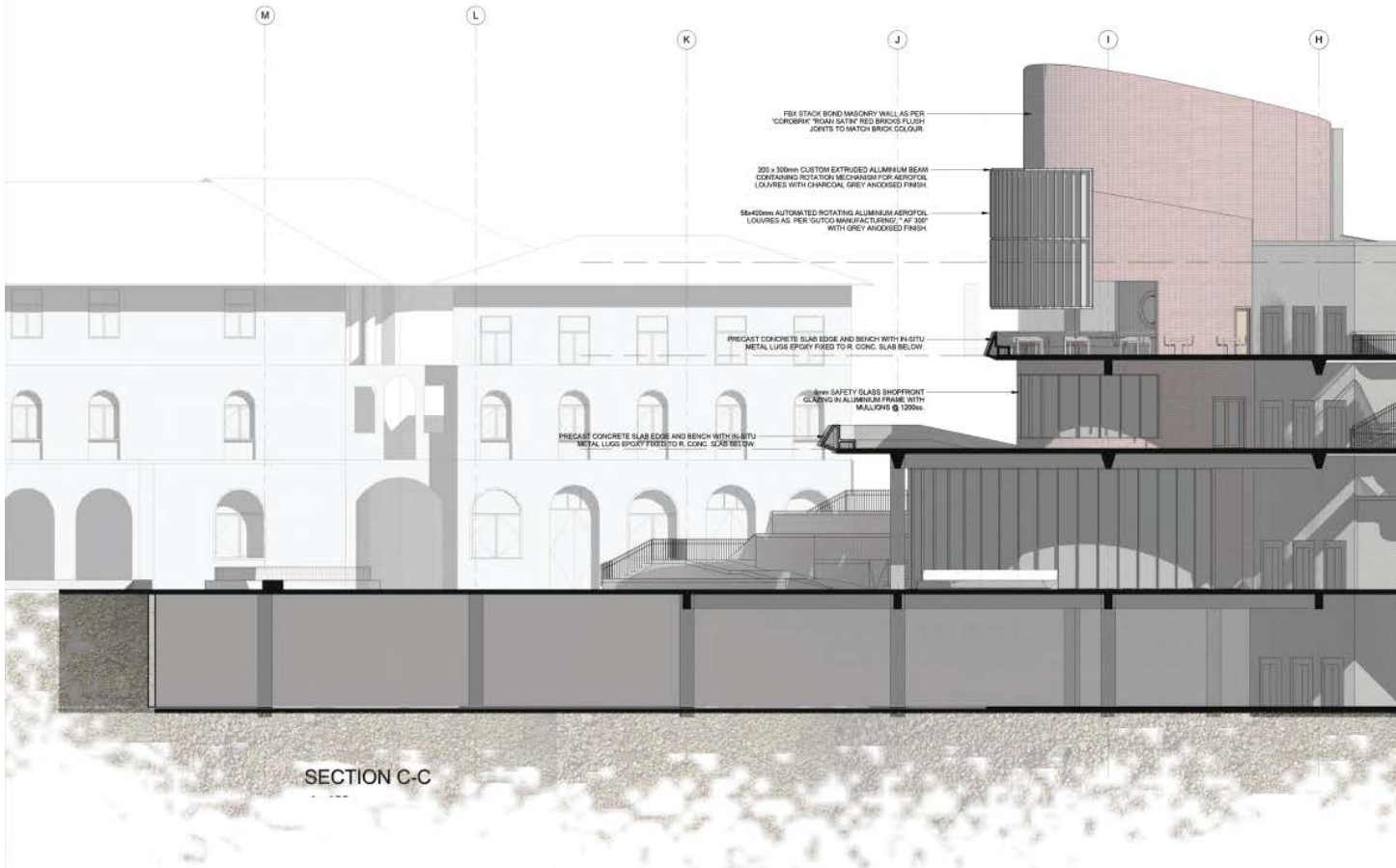
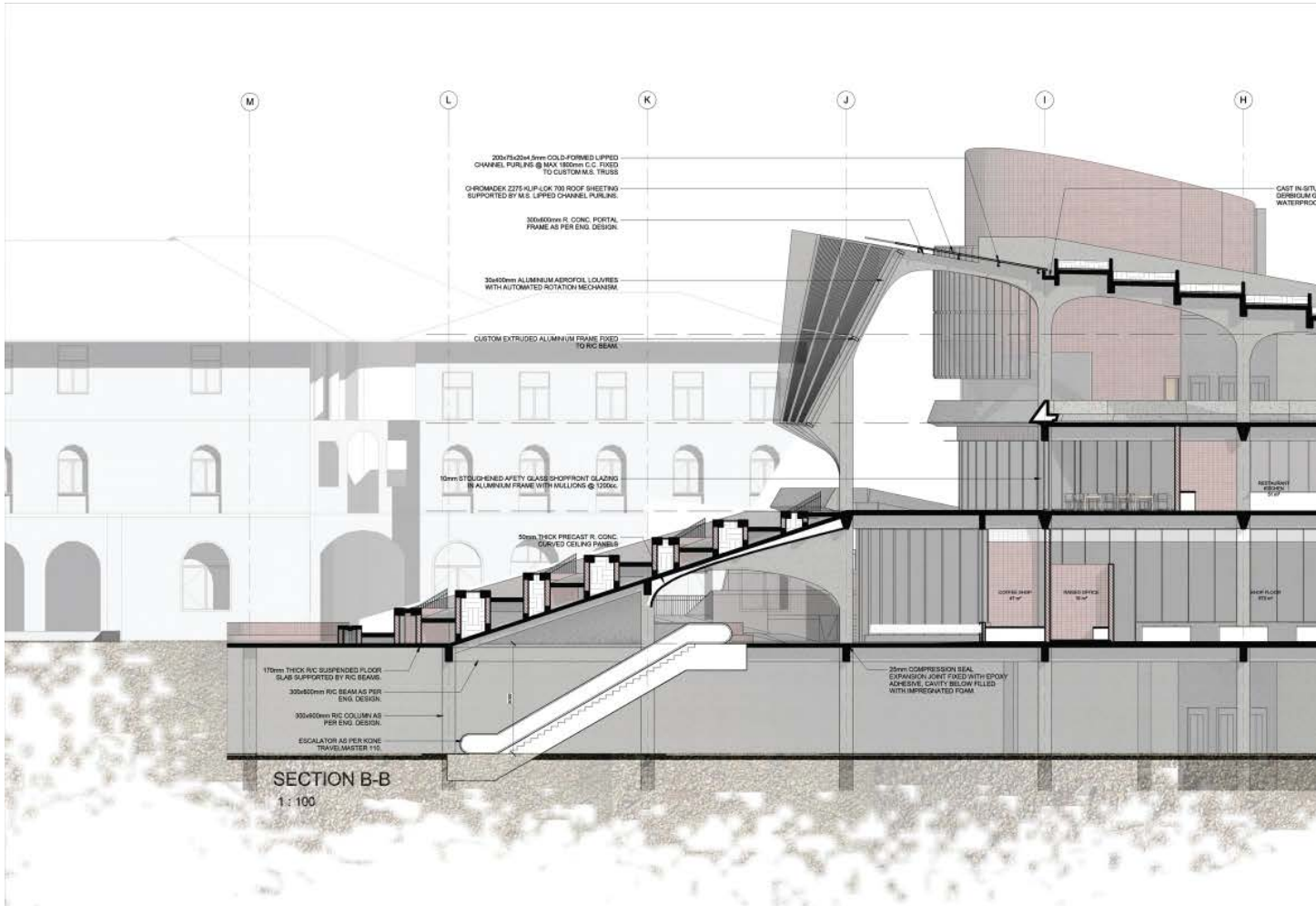












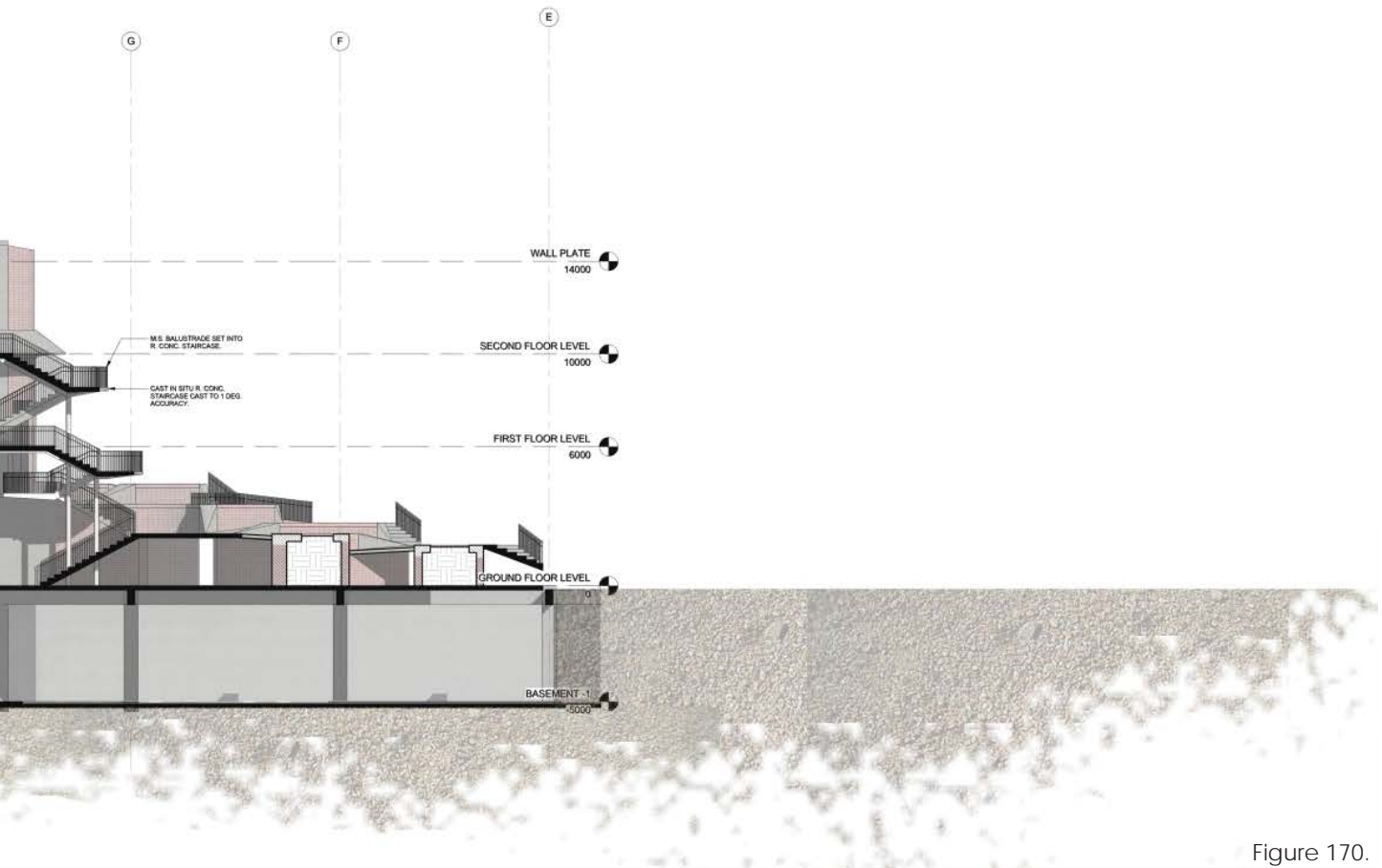
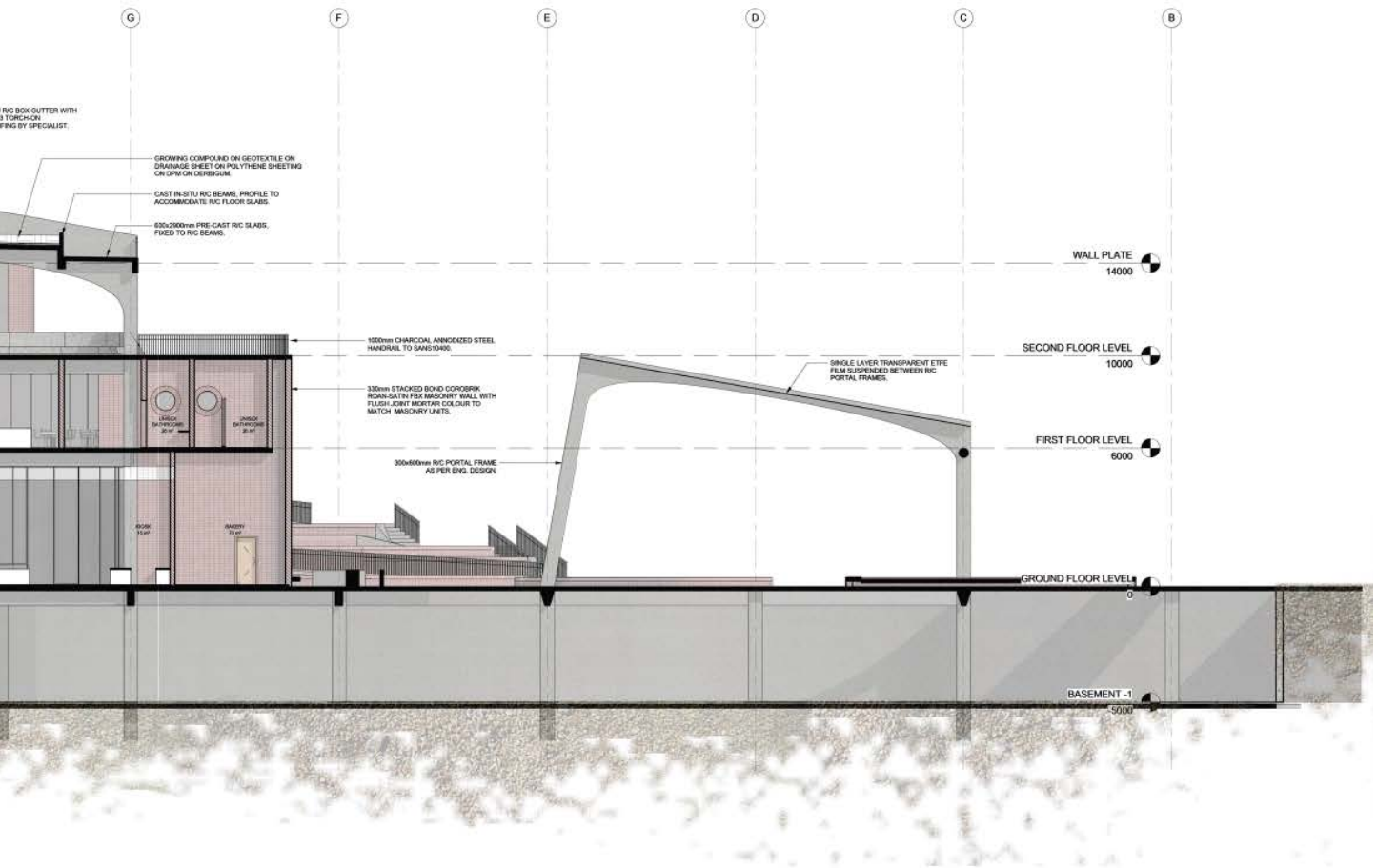


Figure 170.





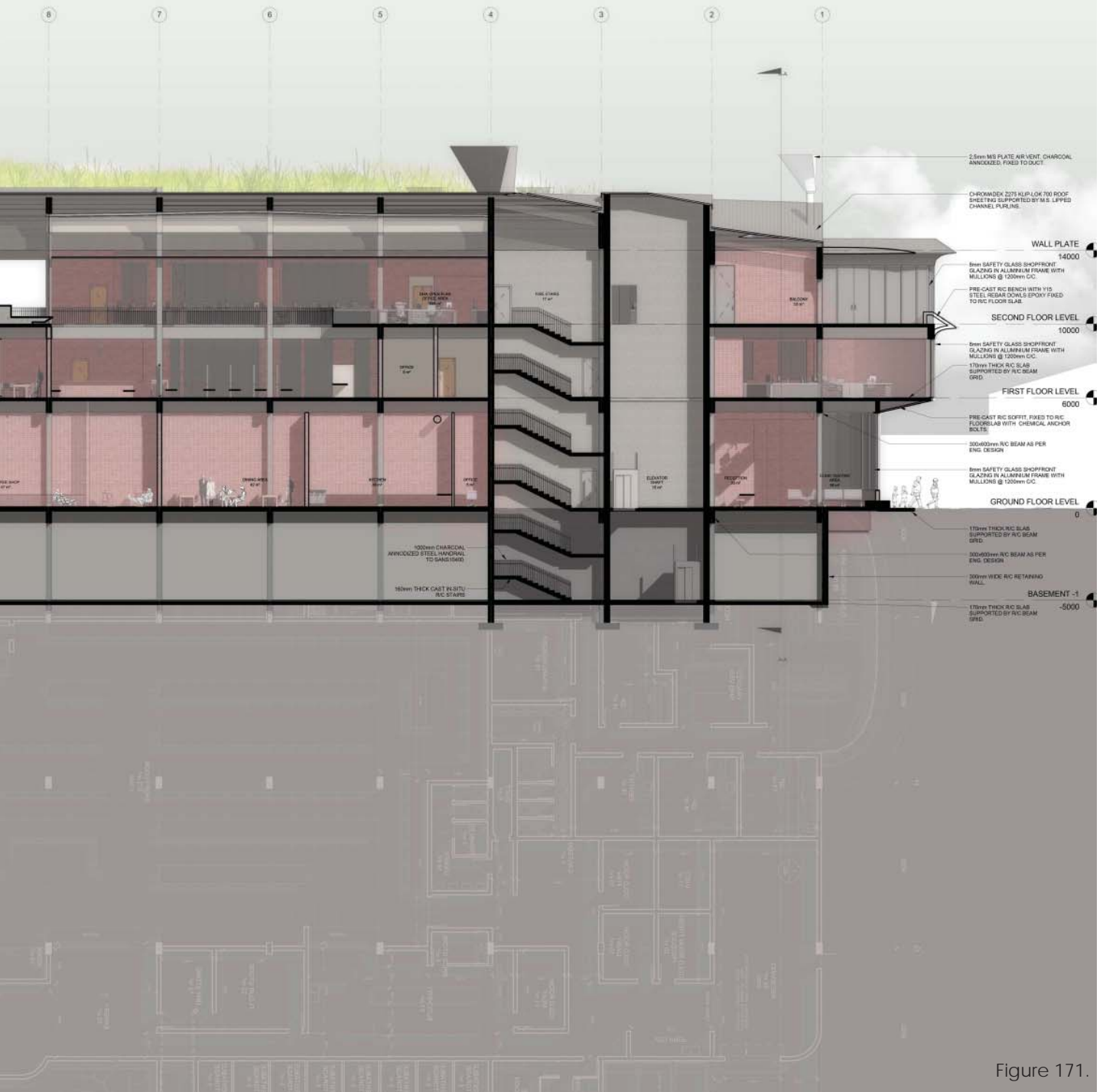


Figure 171.



FIRST FLOOR CONCOURSE



ARCADE CONNECTING



INTERIOR OF THE DEPARTMENT OF HOME AFFAIRS



VIEW OVER THE SQUARE F



VIEW FROM THE EAST AND WEST



VIEW ACROSS THE INFORMAL MARKET SPACE TO THE WESTERN SIDE OF THE PROPOSED BUILDING



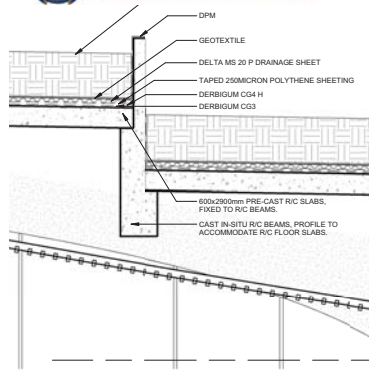
VIEW FROM THE VICTORIA HOTEL



VIEW OF THE ROUTE TO BOSMAN STREET STATION PAST THE INFORMAL MARKET

Figure 172.





2x290mm M.S. CUSTOM BENT FLASHING WITH CHARCOAL GREY CHROMADEX FINISH

6mm THICK CUSTOM FABRICATED M.S. PLATE TRUSS BOLTED TO R. CONC. BEAM  
15mm THICK M.S. END PLATE BOLTED TO R. CONC. BEAM AS PER ENG SPEC

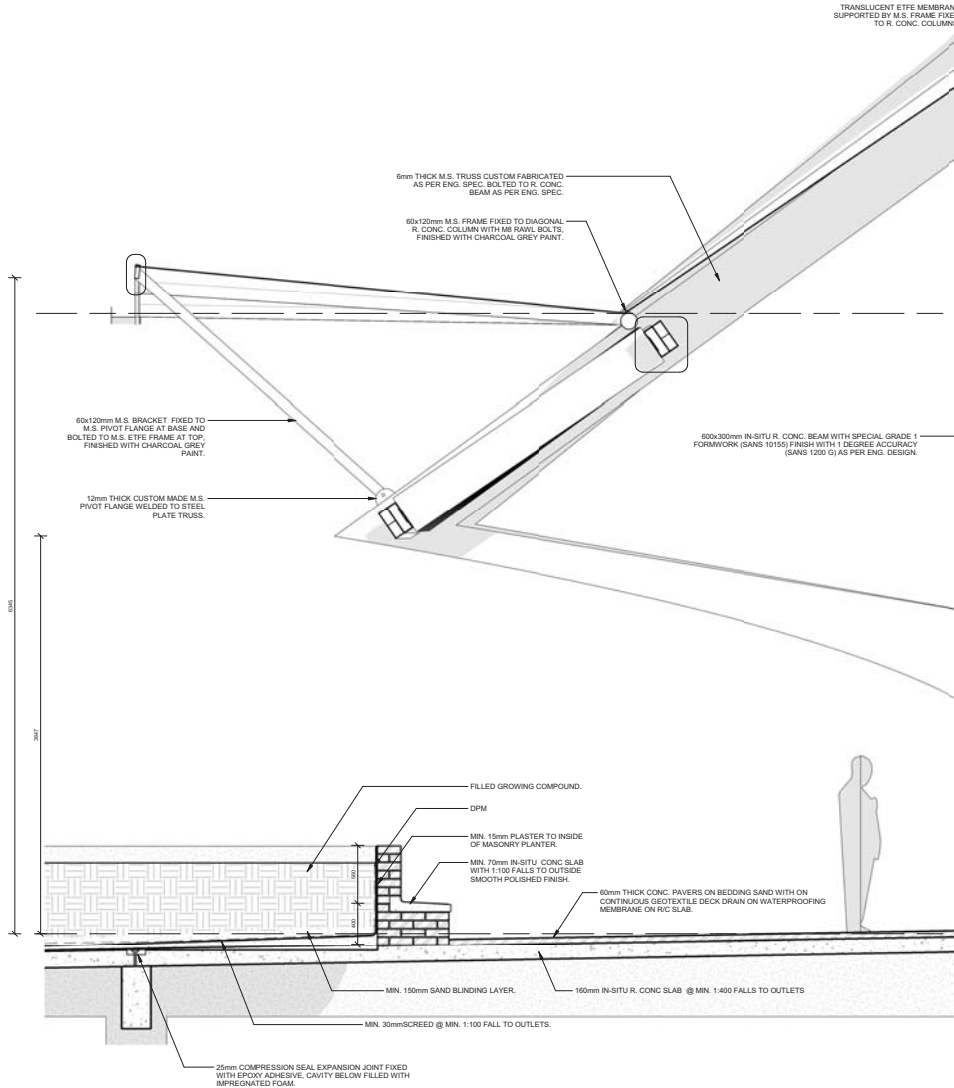
60x120mm M.S. FRAME FIXED TO DIAGONAL R. CONC. COLUMN WITH M8 RAUFL BOLTS FINISHED WITH CHARCOAL GREY PAINT

PRECAST CONCRETE SLAB EDGE WITH IN-SITU METAL LUGS EPOXY FIXED TO R. CONC. SLAB BELOW

58x405mm AUTOMATED ROTATING ALUMINIUM AEROFOL LOUVRES AS PER 'GUTCO MANUFACTURING' AF 30 WITH GREY ANODISED FINISH

200 x 300mm CUSTOM EXTRUDED ALUMINIUM BEAM CONTAINING ROTATION MECHANISM FOR AEROFOL LOUVRES WITH CHARCOAL GREY ANODISED FINISH

TRANSLUCENT ETFE MEMBRANE SUPPORTED BY M.S. FRAME FIXED TO R. CONC. COLUMN



ETEF SECTION

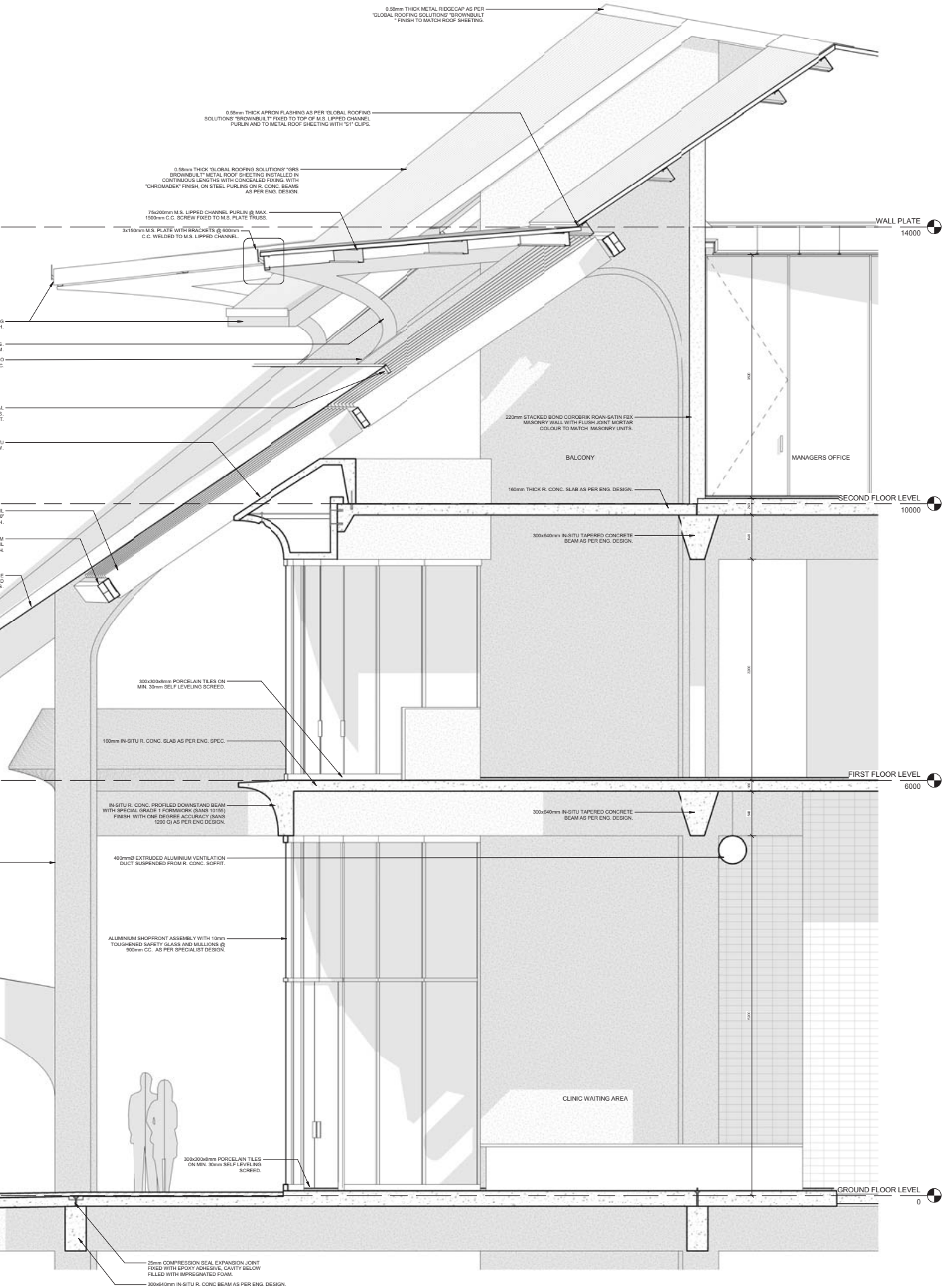
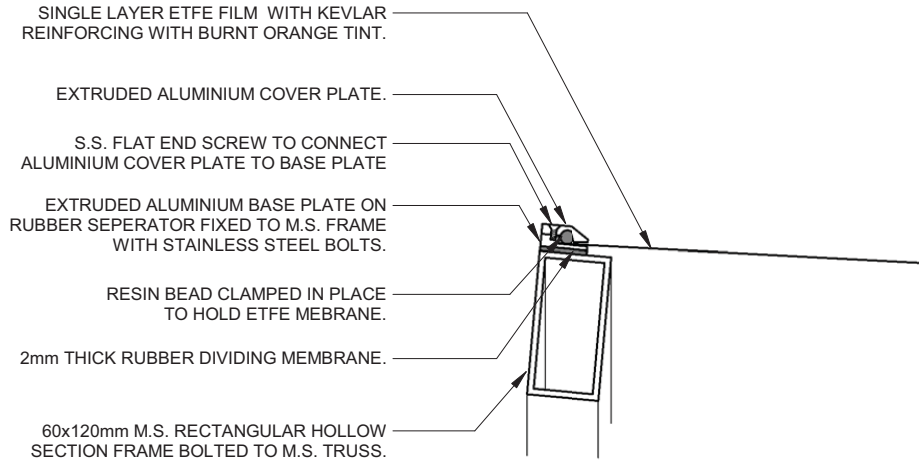
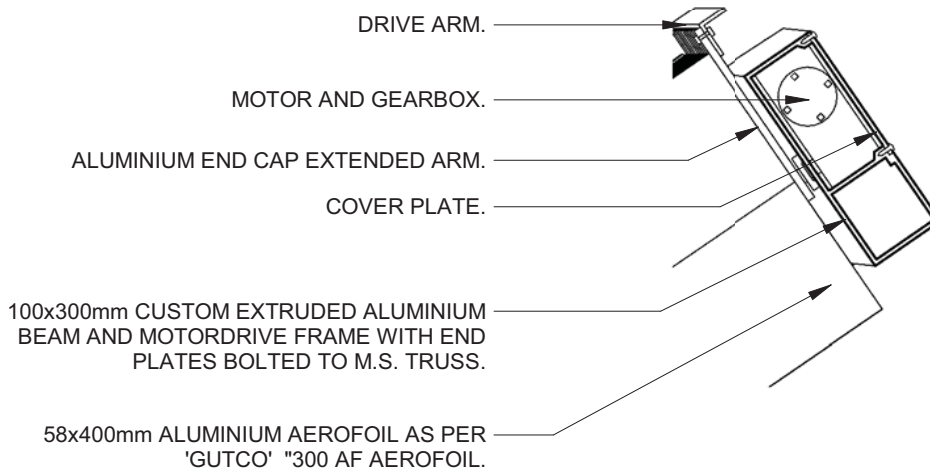


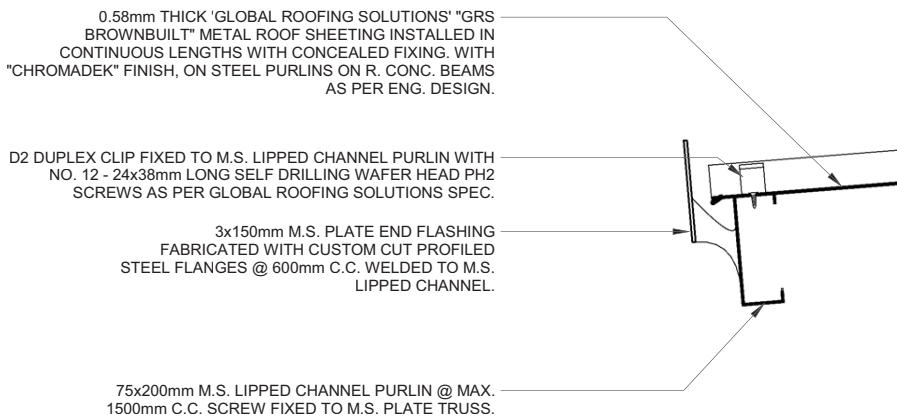
Figure 173.



## ETFE EDGE FIXING DETAIL

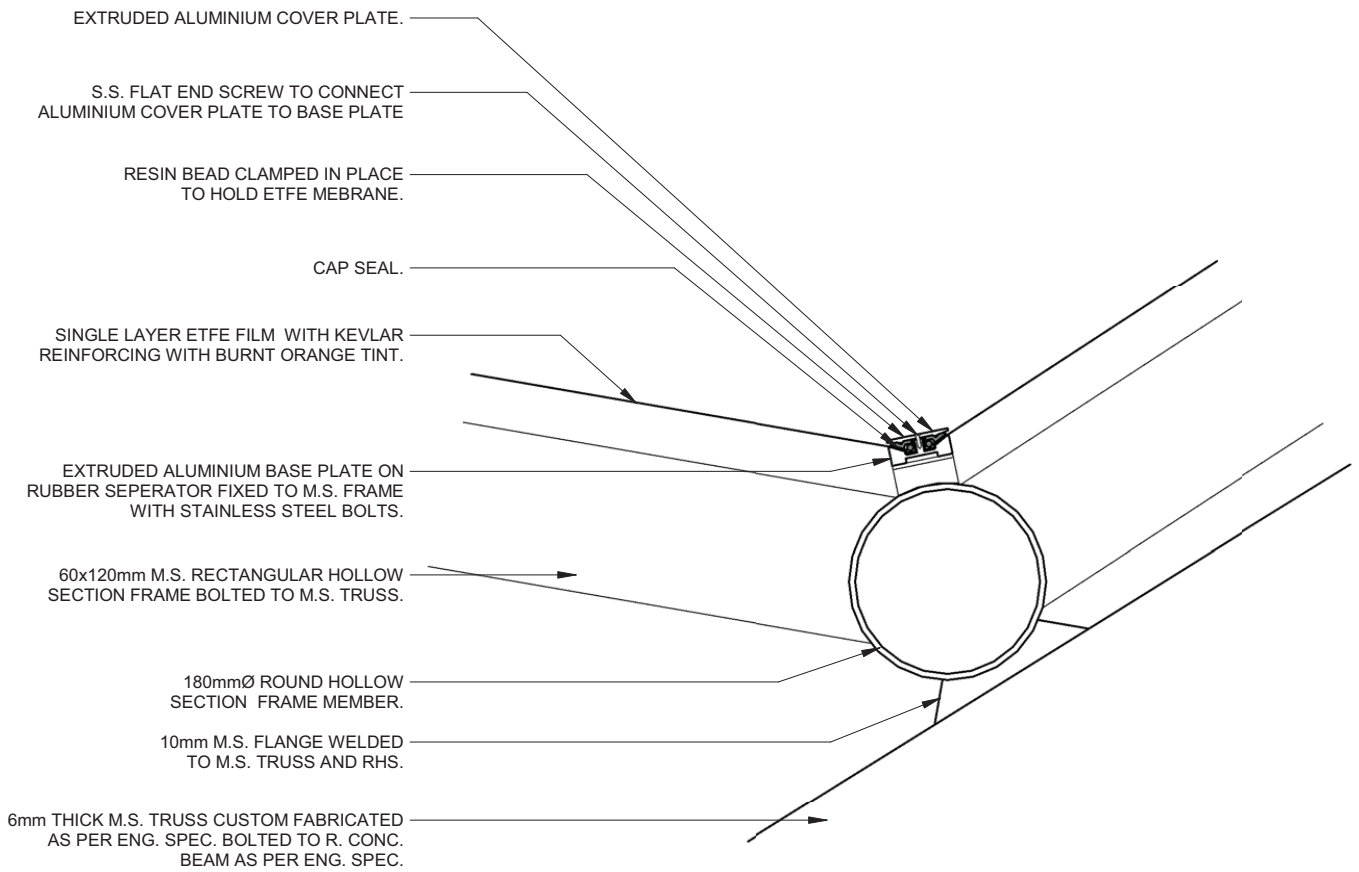


## AEROFOIL LOUVRE MECHANISM DETAIL

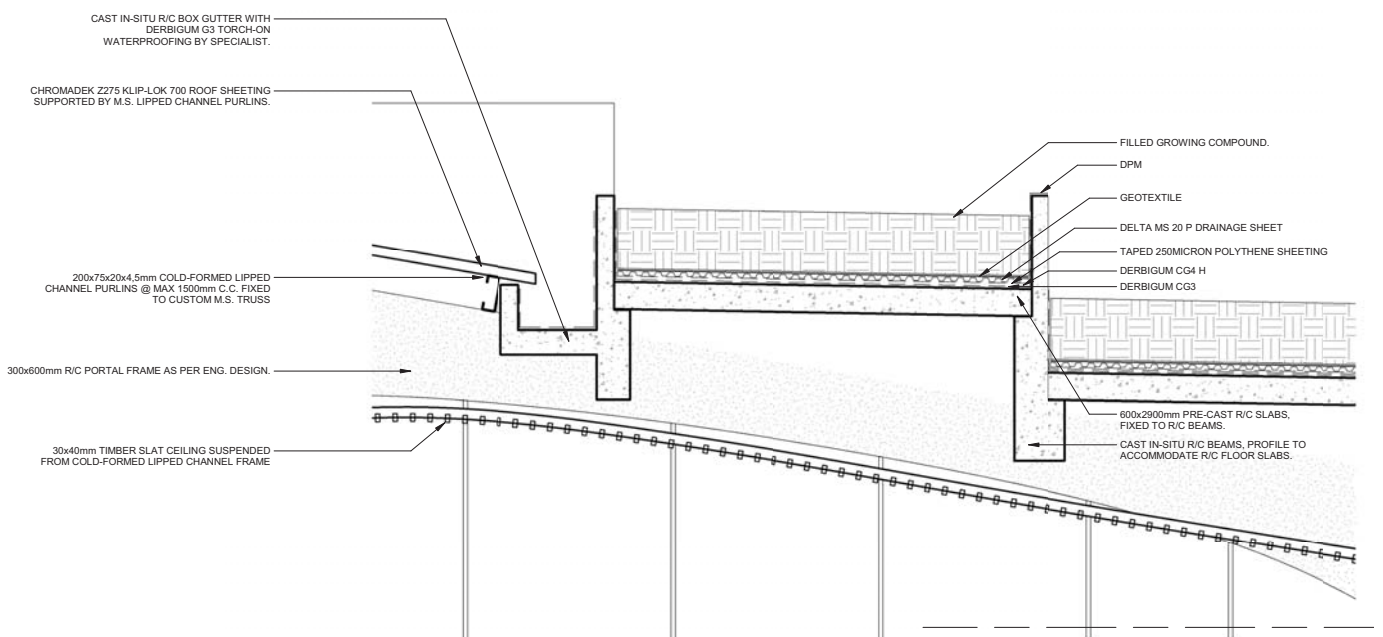


## CUSTOM FASCIA DETAIL





## ETFE MID SECTION



GREEN ROOF DETAIL

Figure 174.

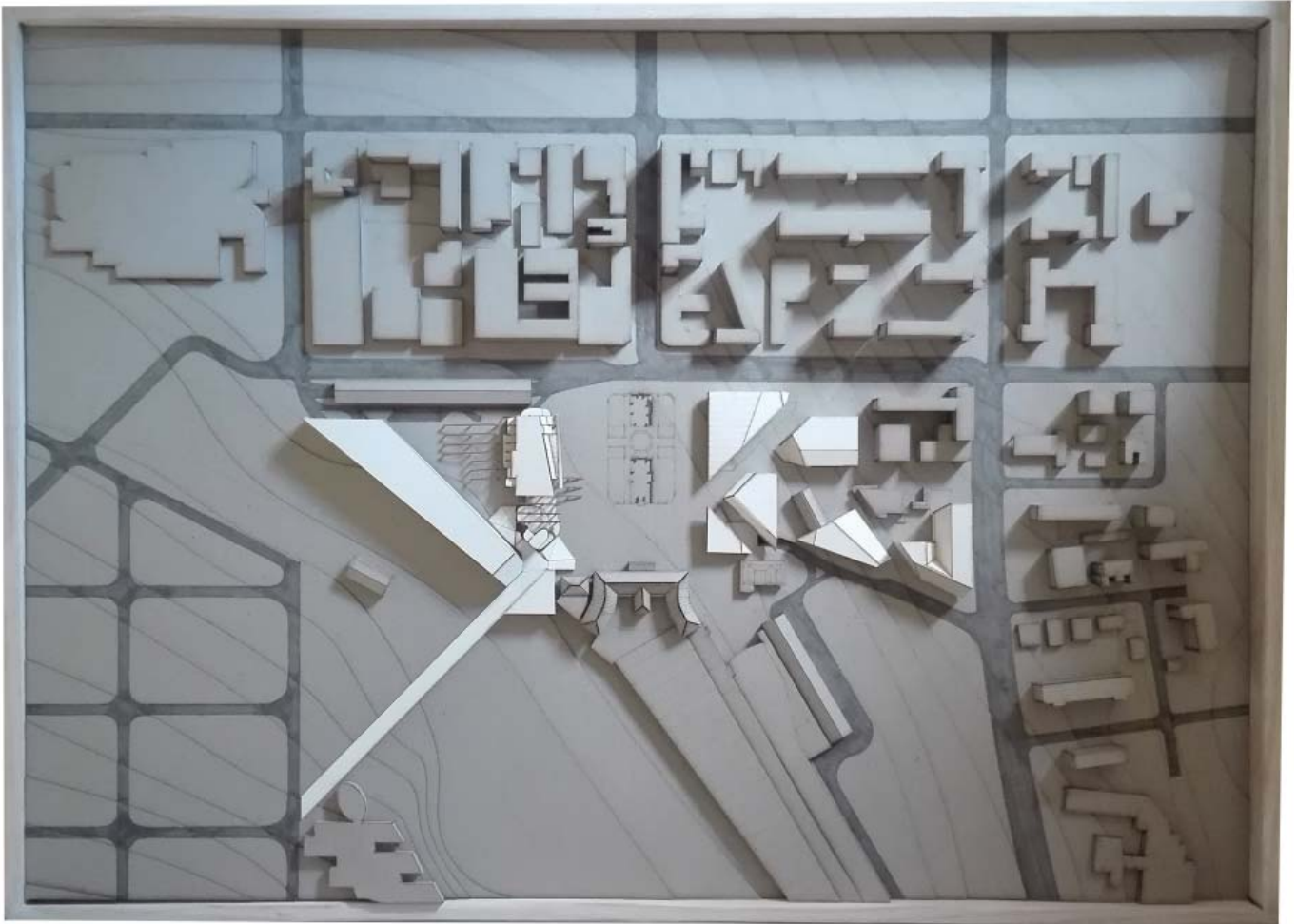


Figure 175.

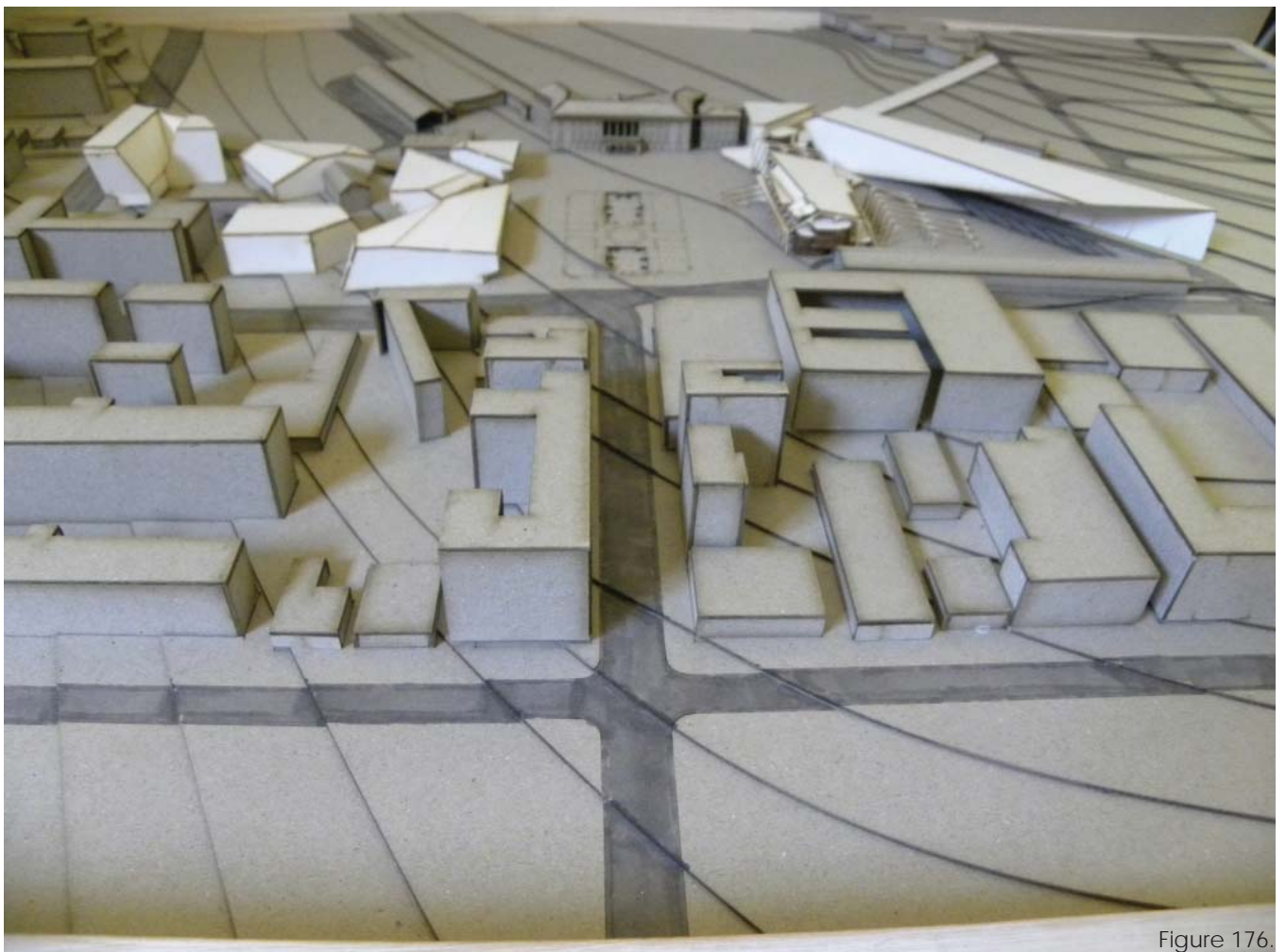


Figure 176.



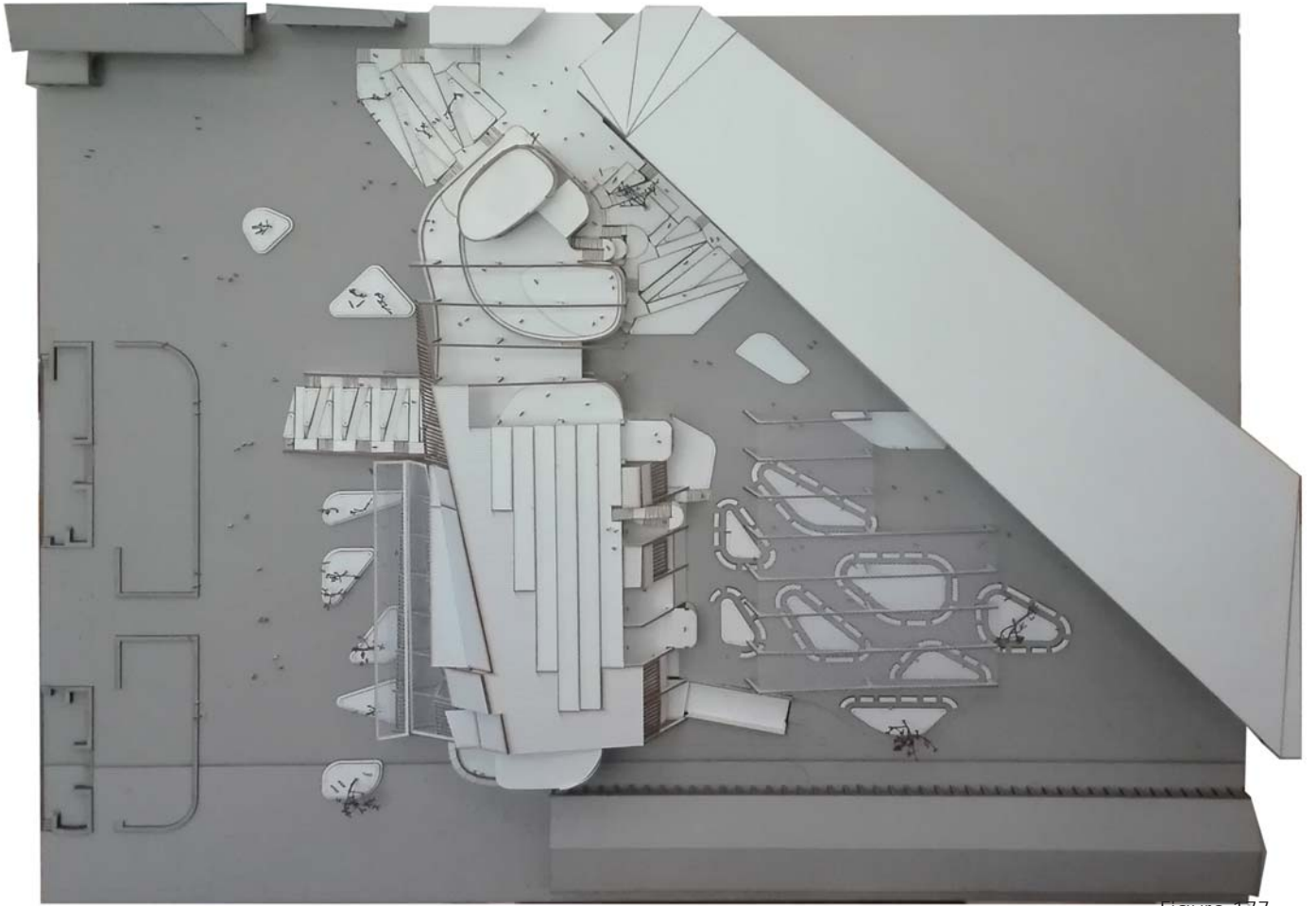


Figure 177.

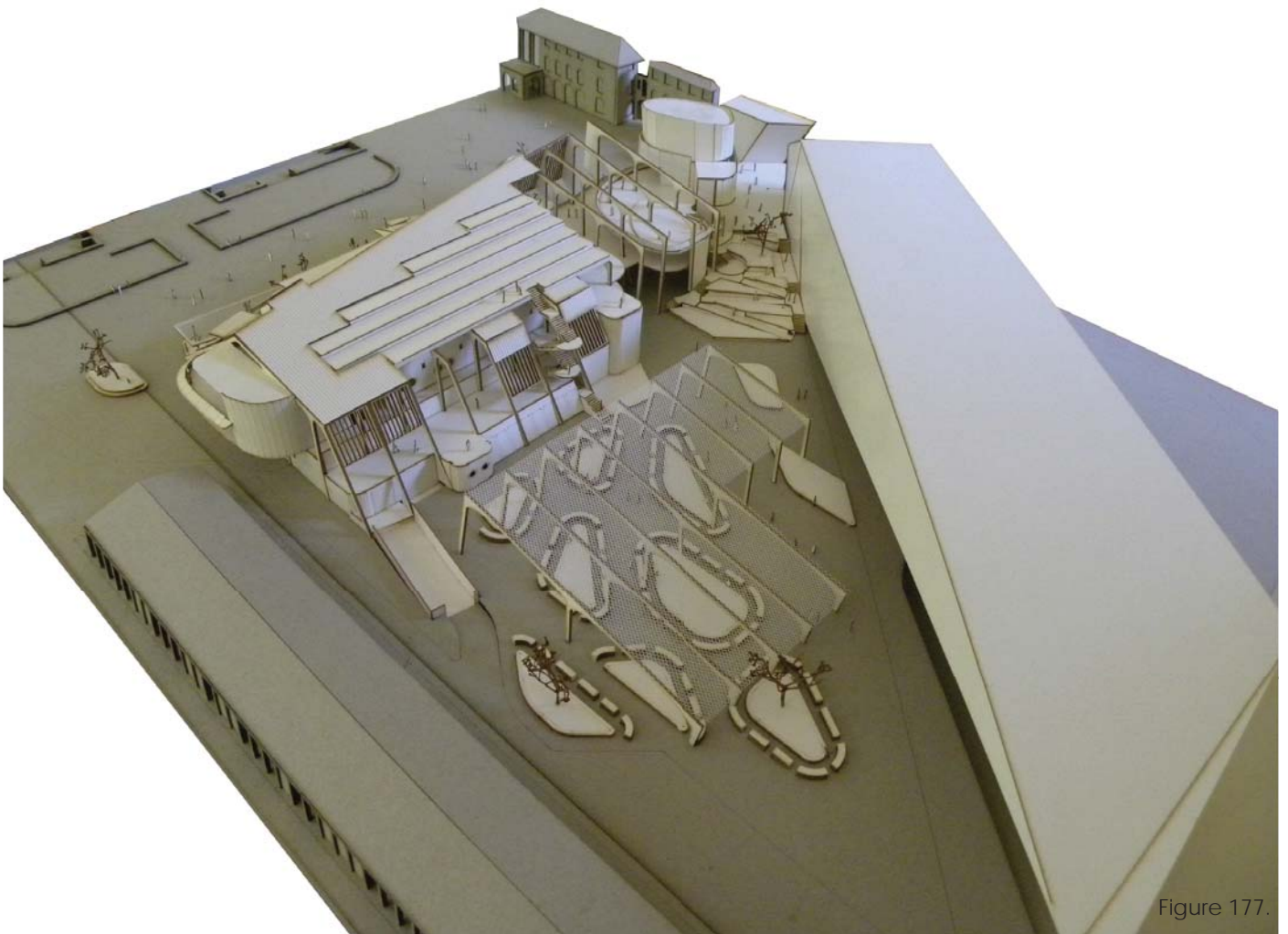


Figure 177.



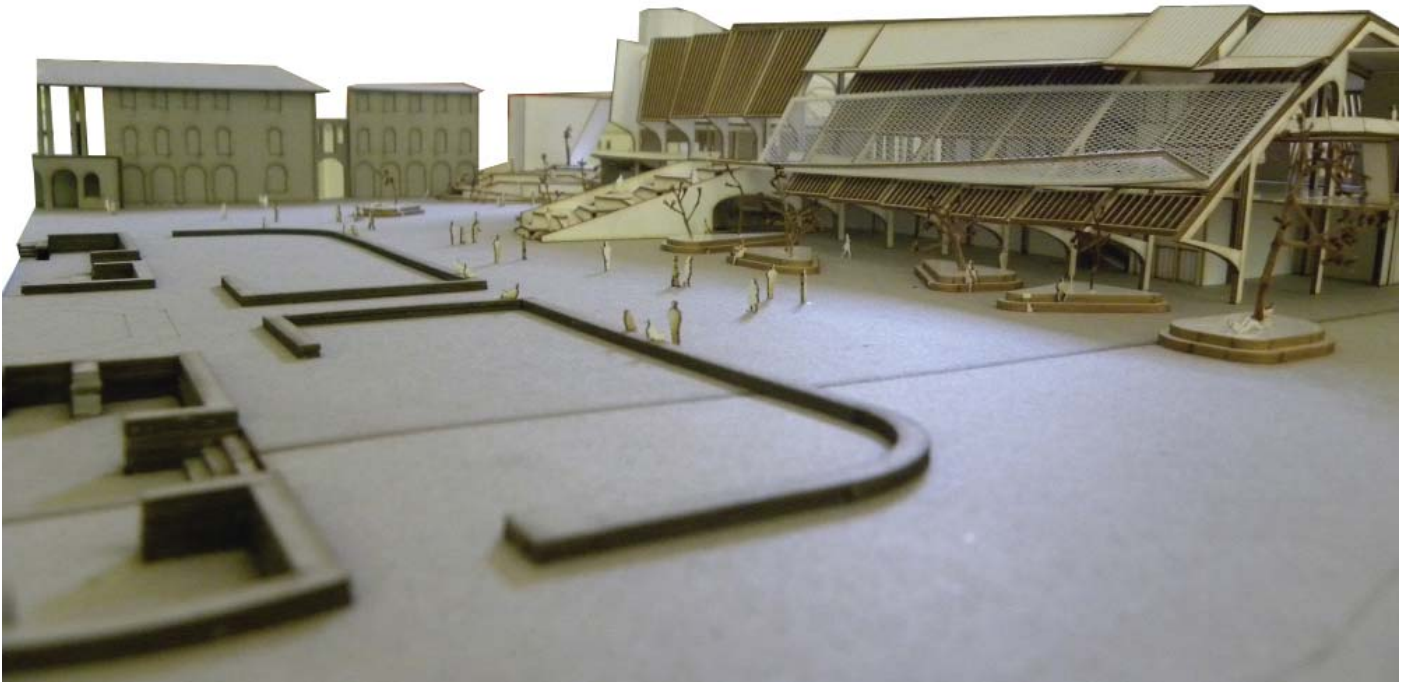


Figure 178.



Figure 179.

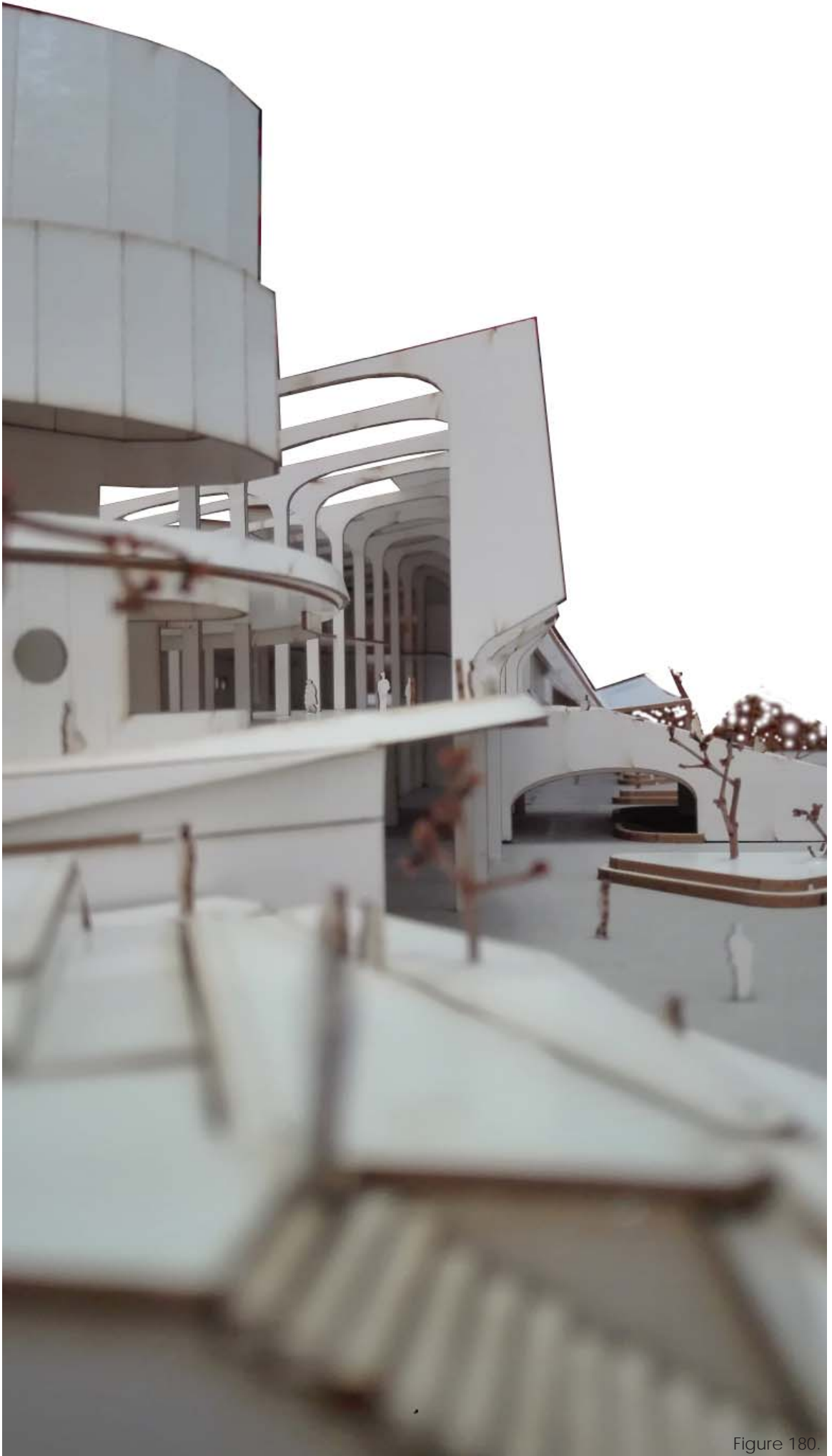


Figure 180. 124

# 5 CONCLU



# VISION

SUMMARY OF ISSUES AND INTENTIONS  
SYNTHESIS OF SOLUTION  
ISSUES THAT REQUIRE FURTHER ATTENTION

# SUMMARY OF ISSUES AND INTENTIONS

Physical issues identified in the context and theory chapter were the fragmented state of the city, caused by apartheid-era spacial legacies, physical urban boundaries and the poor response to these by urban planners and the state. The combination of these issues has led to cut-off, isolated areas within the inner city which are unsafe and desolate.

Metaphysical issues identified were the boundaries existing between State departments and the people they claim to serve and the growing division between people of different cultures, views, classes and races. This division between people is exacerbated by traditional media, digital media (social media) and political discourse. The problem is that these forms of engagement take place from an isolated, acontextual platform and that bigoted views and opinions have an unlimited audience and possible impact.

The intentions of the project was to provide a civic platform for social engagement which would act as a counterbalance to the fragmentation caused by the physical and metaphysical issues. The urban response should encourage people to converge at a public place, this would be achieved by responding to New Urbanist principles and to precedent studies. The intended result would be that the wide diversity of South African people who converge at the Pretoria Station would gain exposure and hopefully engage in dialogue in a real contextual environment.

# SYNTHESIS OF SOLUTION

Pretoria is in need of good public places and buildings that counter the intolerance and lack of empathy engendered by politics, social media and traditional media. The city is fractured by various physical boundaries. Apartheid-era fragmentation persists in the city and bold visionary actions are required to reverse these. The fractured landscape of parts of the city centre is dangerous and desolate rendering the city quite unwalkable for pedestrians. The majority of the population who frequent the city rely on their feet to get around, according to Statssa, “Fewer than two out of ten black African households own a motor vehicle in working condition, while more than nine in ten of white households own a motor vehicle in a working condition.” (Statssa, 2017). This dissertation therefore proposes an architectural response that counterbalances the action of politics, social media and traditional media and that accommodates and serves the predominantly pedestrian nature of the city centre.

The Pretoria Station site is an ideal location to start this process as it serves a broad spectrum of the South African population. As a gateway to the city, the site can contribute to the character and identity of the city providing residents, daily commuters and visitors with a vibrant place that forms an integral part of the city.

Numerous studies show that by applying basic principles of new urbanism, people are encouraged to engage with one another and their city. This provides an alternative to the isolated and alienated engagement encouraged by social media, alternative media and political dialogue which was shown to facilitate intolerance and bigotry.

A folded landscape typology was presented that allows people to interact with others, the building and their city by providing walkways and promenades that flow over, under, through and around the built fabric - providing opportunities for chance encounters and scenic views of the surrounding activity. It becomes a Civic Knot where people are encouraged to interact with one another in a real, tangible context. For urban life to thrive, a balance of daily needs, recreation, work and appropriation are required. The New urbanist principles of walkability, mixed use, connected networks and place making provided a solid basis from which the humanist provisions of this dissertation grows.

The architectural response is not imposing for its own sake; it grows out of the ground and has been cut and manipulated by the human activities, requirements and accessibility.



# ISSUES THAT REQUIRE FURTHER ATTENTION

The Pretoria Station site forms part of a complex network of transport nodes which are integrally related with one another and with the city. The site should therefore be developed as a whole so that its legibility and connectivity can be maintained.

As part of creating a public civic square, its edge condition and definition must be addressed, therefore the Eastern side of the Station Gardens should be defined by a building with similar considerations as the one proposed in a future phase. The future development of Salvokop is also essential to the vibrancy of the site.





Figure 149.

# 6 REFEREN



# ICES

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