

FIG 7-1: TONI VAN JAARVELDT/UNIVERSITY OF PRETORIA





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design product

The building has curvilinear lines and a flowing shape in order to emphasize the concept of Guiding Innovative Thought. The building increases in height from a two storey building on the west to a four storey building on the east. The wing to the north of the building increases in height from two storeys to three. On Lynnwood Road the facade increases in solidity from the west to the east, to illustrate the concept of formalizing and solidifying an innovative concept. This narrative the building illustrates, is finished off at the end with a mosaic artwork on the side of the wall which are changed over a period of time.

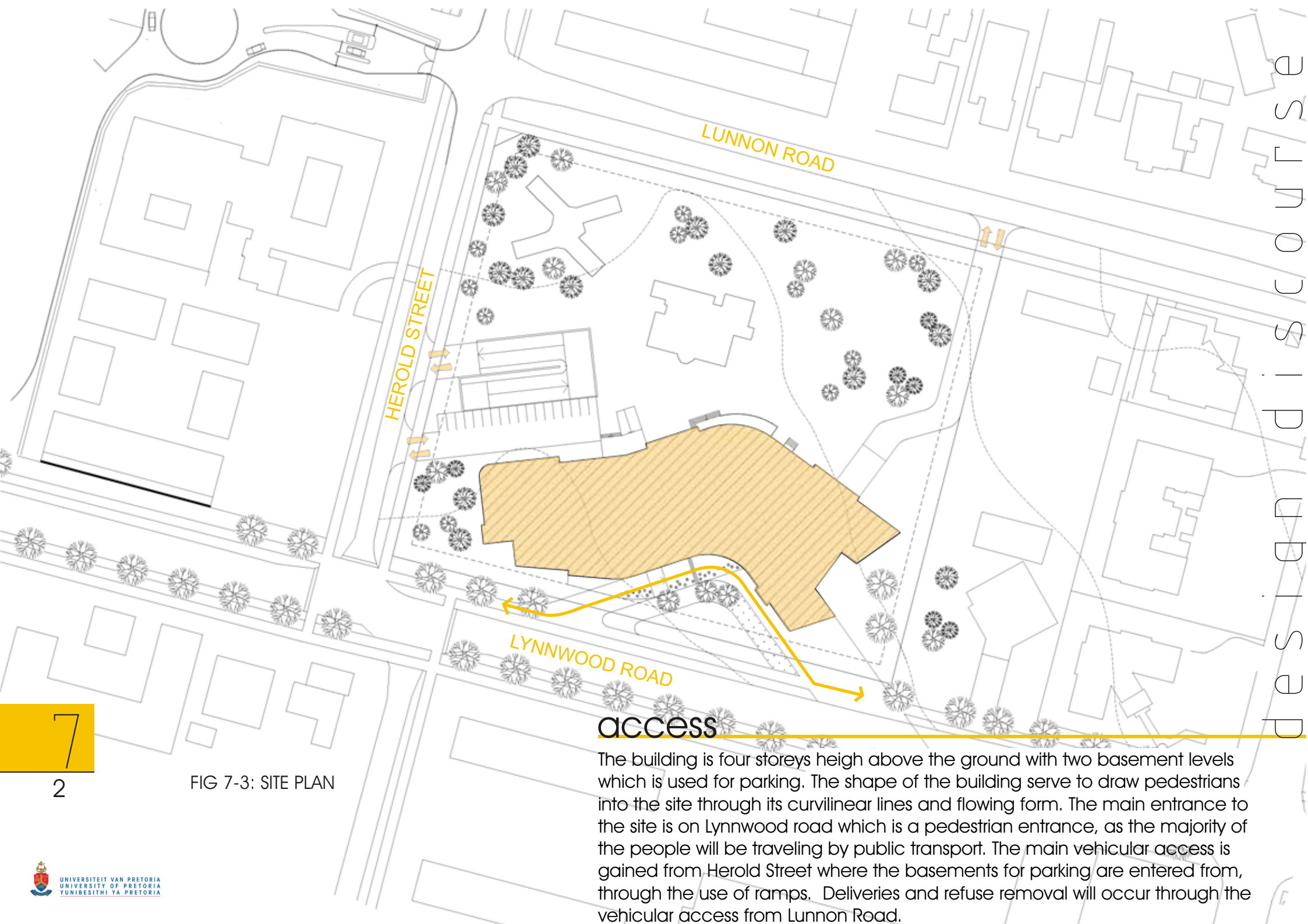


FIG 7-3: SITE PLAN

access

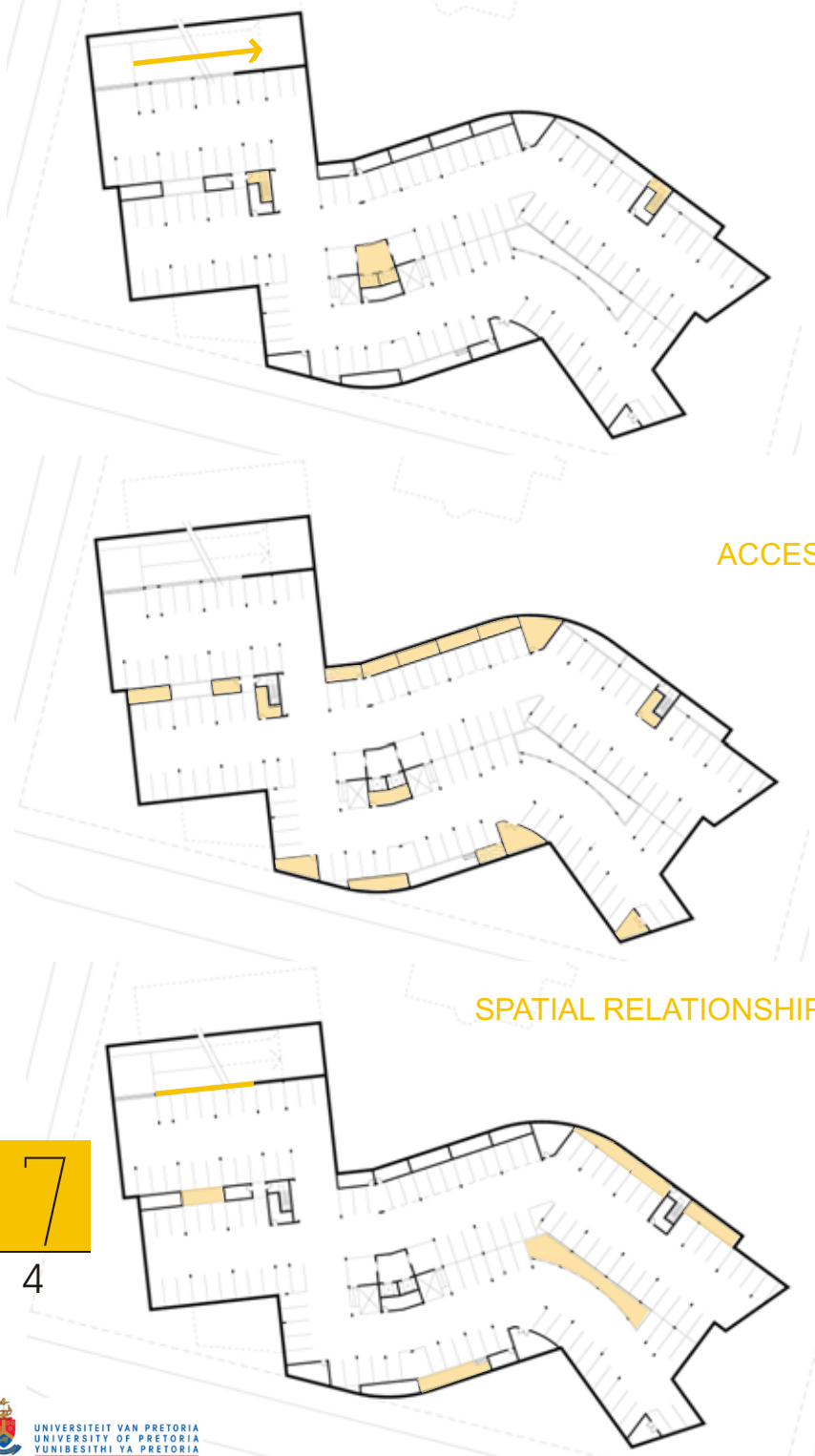
The building is four storeys high above the ground with two basement levels which is used for parking. The shape of the building serve to draw pedestrians into the site through its curvilinear lines and flowing form. The main entrance to the site is on Lynnwood road which is a pedestrian entrance, as the majority of the people will be traveling by public transport. The main vehicular access is gained from Herold Street where the basements for parking are entered from, through the use of ramps. Deliveries and refuse removal will occur through the vehicular access from Lunnon Road.



FIG 7-3: SITE PLAN

spatial relationships

The shape of the building forms a public green space, with orchestrated fountains which assist in the creation of an innovative atmosphere. The green space at the beginning and a shared green space with the church at the end, serve to make the building sit softer on the landscape. The green space between the church forms a threshold which serve to respect the presence of the church. There is also another public green space to the north where exhibitions can take place. The building is a landmark, marking the end of the university precinct, with the base material assisting in creating the 'genius loci'.



Access

Vehicular access takes place through a 1:8 ramp. There are two lifts which give access to the rest of the building, which in-turn is accessed through a ventilated lobby. The air in the lobby is filtered through a solar powered air-condition split unit and the space is kept closed by automatic doors. This system is further discussed under the technical investigation and systems. The two fire escape stairs provide escape routes, which lead directly to the outside with no direct connection to the rest of the building above ground.

SPATIAL RELATIONSHIPS

The basement provides for 131 parking bays including 2 paraplegic parking bays. It provides spaces for store rooms which are rented by the tenants as well as space for rainwater harvesting tanks and their pump rooms. The rainwater systems is discussed under the technical investigation and systems.

Natural light and ventilation

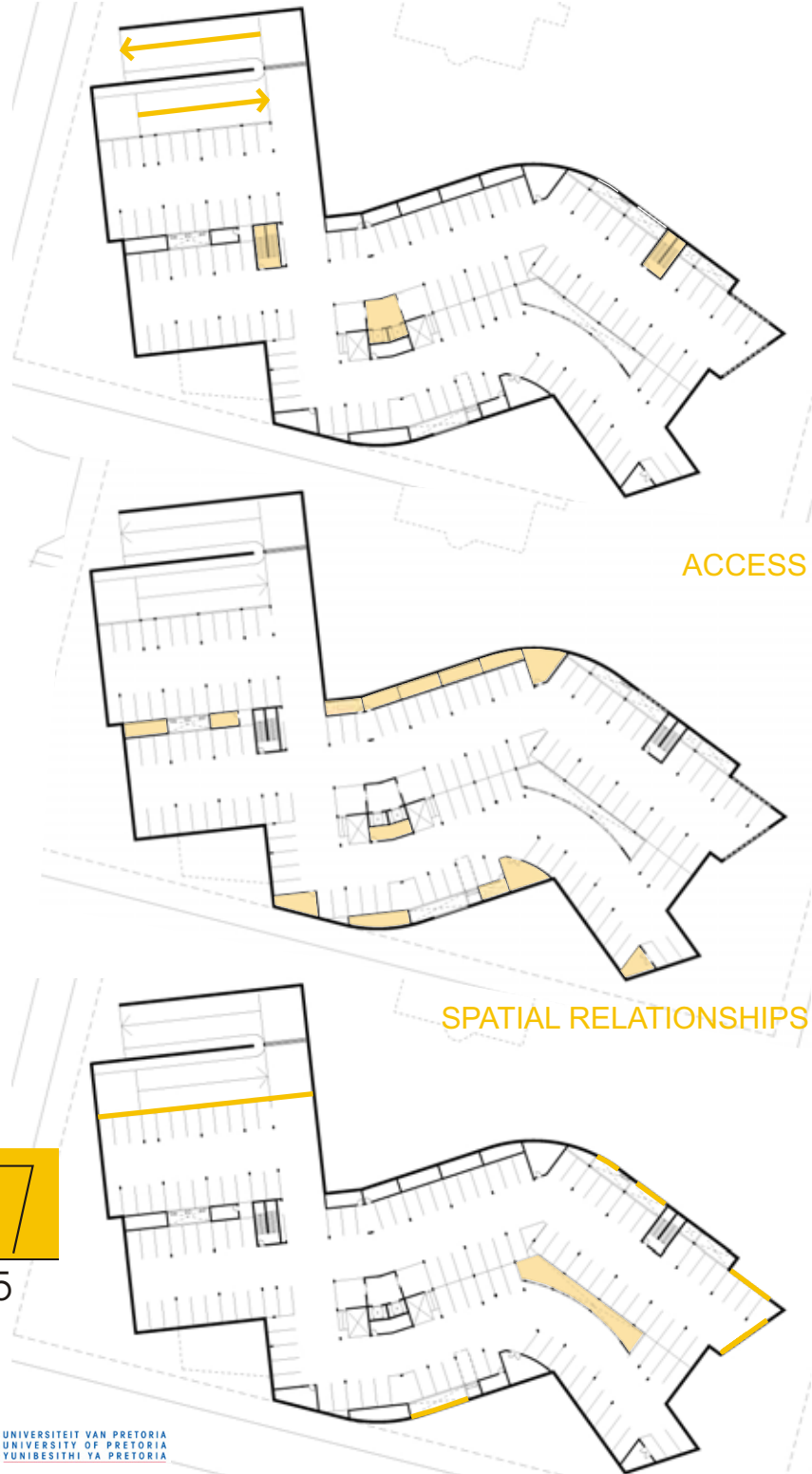
To the northeast, natural light enters the basement through openings in the slab of the basement above, which in-turn enters through opening grills in the walls. Natural light also enters through grill openings at the ramp. In the middle, light enters through the opening in the slab above from opaque winblocks situated in the slab of the atrium where direct sun will enter.

Plant boxes are situated to the northeast where the sunlight enter as well as in the middle where the atrium provides light. These plant boxes will get enough sunlight and would serve to soften the harshness of the basement. Ventilation occurs through the grill openings at the ramp and also to the top basement through openings in the slab above, which is ventilated to the outside.

basement -2

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Access

Vehicular access again takes place through a 1:8 ramp. The lifts are accessed through the ventilated lobby, which give access to the rest of the building. The two fire escape stairs provide escape routes, which lead directly to the outside with no direct connection to the rest of the building above ground.

SPATIAL RELATIONSHIPS

The basement provides for 131 parking bays including 2 paraplegic parking bays. It provides again spaces for store rooms which are rented by the tenants as well as space for rainwater harvesting tanks and battery rooms for the photovoltaic panels situated on the roof. This system will be discussed in detail under the technical investigation and systems.

Natural light and ventilation

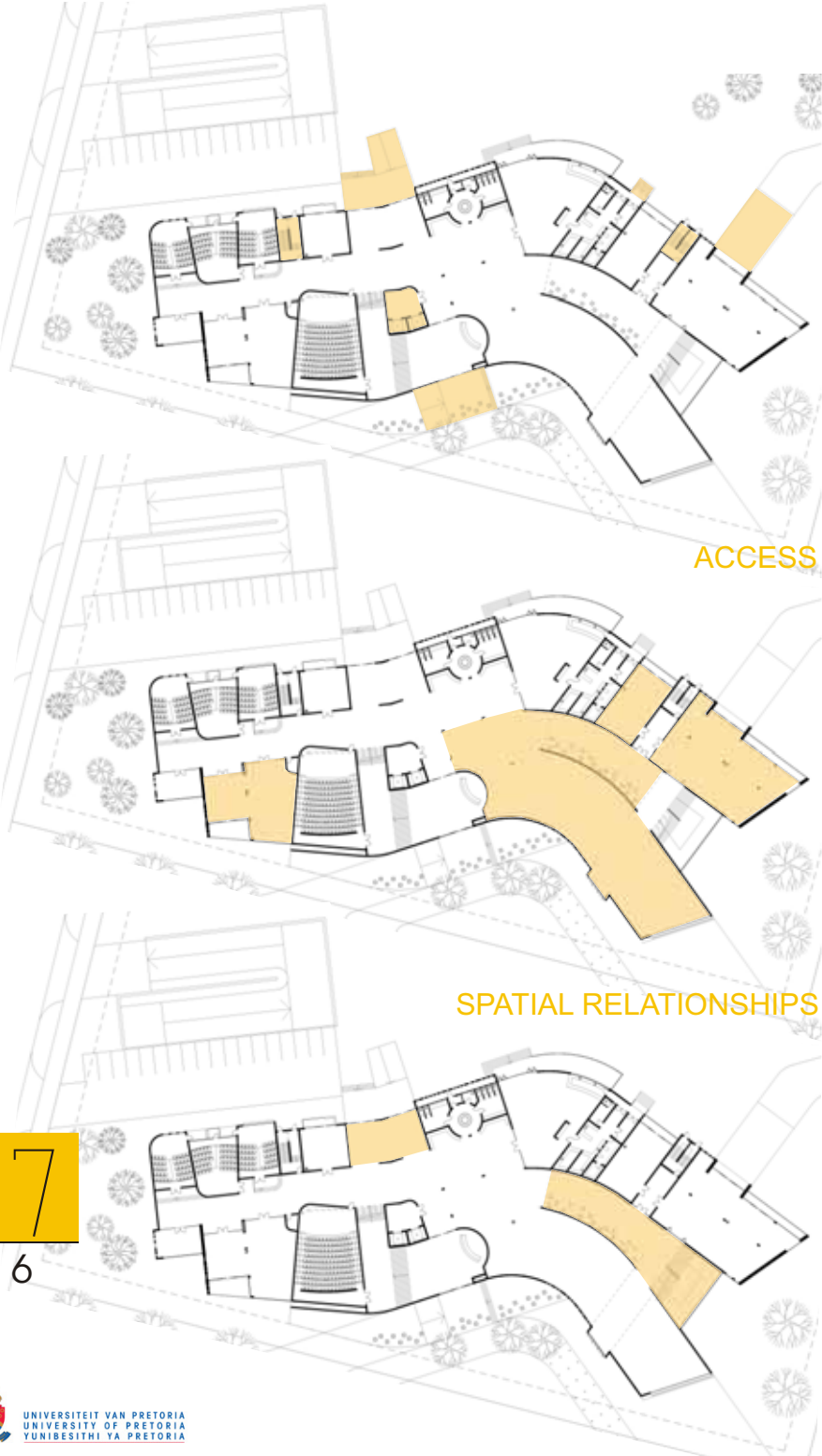
To the northeast natural light enters the basement through opening grills in the walls and also through openings at the ramp. In the middle, light enters through opaque winblocks situated in the slab of the atrium above where direct sun will enter between March and September.

Ventilation occurs through the openings at the ramp and to the northeast and south through grill openings. Ventilation is enhanced through the use of solar powered fans situated at the northern openings in order to draw cool shaded air from the south and southeast. The system is further discussed under the technical investigation and systems.

basement -1

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Access

The main entrance to the building is to the south on Lynnwood Road as the majority of the people will be pedestrians, arriving by public transport. There is a secondary entrance to the north as well. There is a separate entrance to the northeast for the mechanical workshop in order for heavy machinery to have easy access. The restaurant also have a separate entrance for deliveries as well as refuse to be taken out. Access to the floor is also gained through the two lifts and escape provided by the two fire escape staircases.

SPATIAL RELATIONSHIPS

Indicated is the spaces that are left open and without internal divisions, such as the offices, workshops and the exhibition space. In these areas, spaces and rooms are managed by creative individuals through the use of moveable partitions. There are water and drainage points provided in the offices and workshops, one in the middle of the space to make it a public gathering, and one elsewhere for an alternative. The large exhibition space would be changed and redesigned with each exhibition and is therefore open plan and robust.

Natural light and ventilation

Natural light enters the building through glass facades and windows and direct sun light is managed through adjustable aluminium louvers and balcony overhangs. Natural light penetrates right through the building through the atriums. Ventilation takes place through adjustable glass louvres or windows. Ventilation for the large lecture hall is intricate and will be discussed under the systems. Indicated is where the atriums are, as the entire building's ventilation is enhanced through the stack ventilation that takes place at the atriums through clerestory adjustable louvers. The ventilation is enhanced through solar powered fans but is discussed in more detail under the systems.

ground floor





Access

The main access to the floor is gained through the central mezzanine stair which encircles the lift core. Another important access is gained from the exhibition space below through a staircase which also serve to be part of the exhibition space. The two lifts are again present for easy access as well as for disabled persons. The two fire escapes provide the escape routes.

SPATIAL RELATIONSHIPS

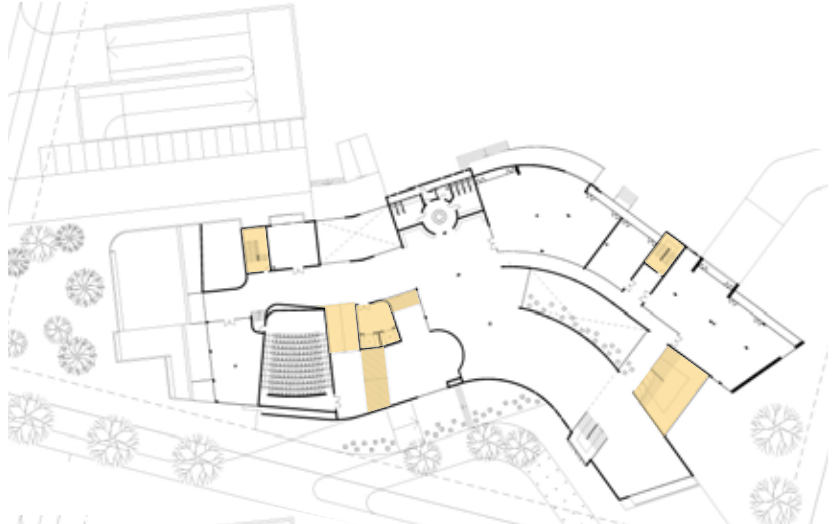
The exhibition space becomes a double volume for the other spaces to look upon the exhibition. The double volume give the exhibition space a high volume to create the ambiance fit for an exhibition space. Through the double volume other spaces can be part of the exhibition in order to inspire and motivate. Indicated again is the offices, workshops and labs which are without internal divisions, to be managed by the creative individuals themselves through the use of moveable partitions. The water and drainage points are again provided in these offices and workshops, one in the middle of the space to make it a public gathering, and one elsewhere for an alternative position.

Natural light and ventilation

Again natural light enters the building through glass facades and windows and direct sun light is managed through adjustable aluminium louvers and balcony overhangs. The atriums are indicated again where the natural light penetrates right through the building and where ventilation is enhanced through the use of solar powered fans situated at the clerestory glass louvers.

first floor

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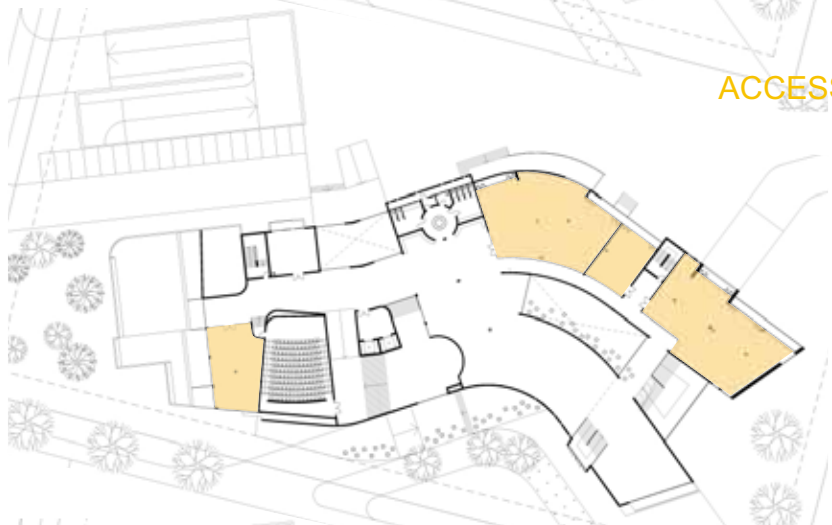
ACCESS

Access

Again the main access to the floor is gained through the central mezzanine stair which encircles the lift core and includes a ramp in order for disabled persons to get access to the exhibition space. Another access is again the staircase to the east which is part of the exhibition space. The two lifts are again present for easy access as well as for disabled persons. The two fire escapes provide the escape routes.

SPATIAL RELATIONSHIPS

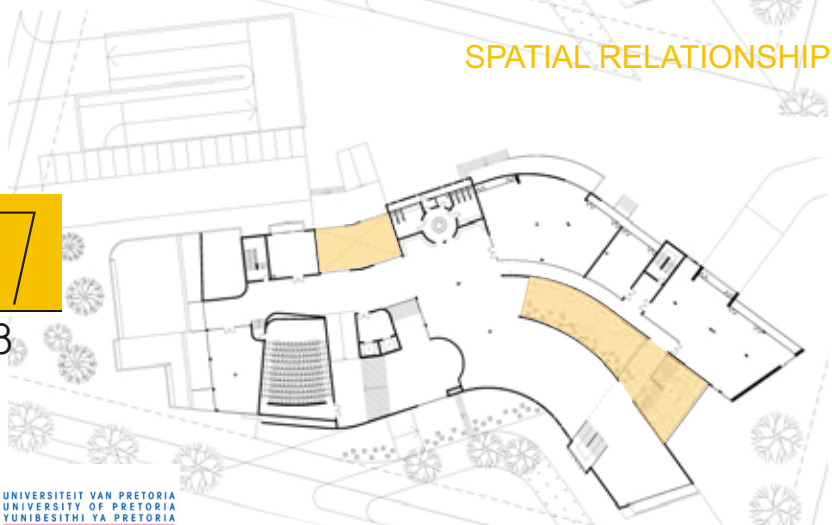
Again indicated is the offices, studios and labs which are without internal divisions, to be managed by the creative individuals themselves through the use of moveable partitions. The water and drainage points are also provided in these offices and workshops.



SPATIAL RELATIONSHIPS

Natural light and ventilation

Again natural light enters the building through glass facades and windows and direct sun light is managed through adjustable aluminium louvers and balcony overhangs. The atriums are indicated where the natural light penetrates right through the building and where ventilation is enhanced through the use of solar powered fans situated at the clerestory glass louvers.



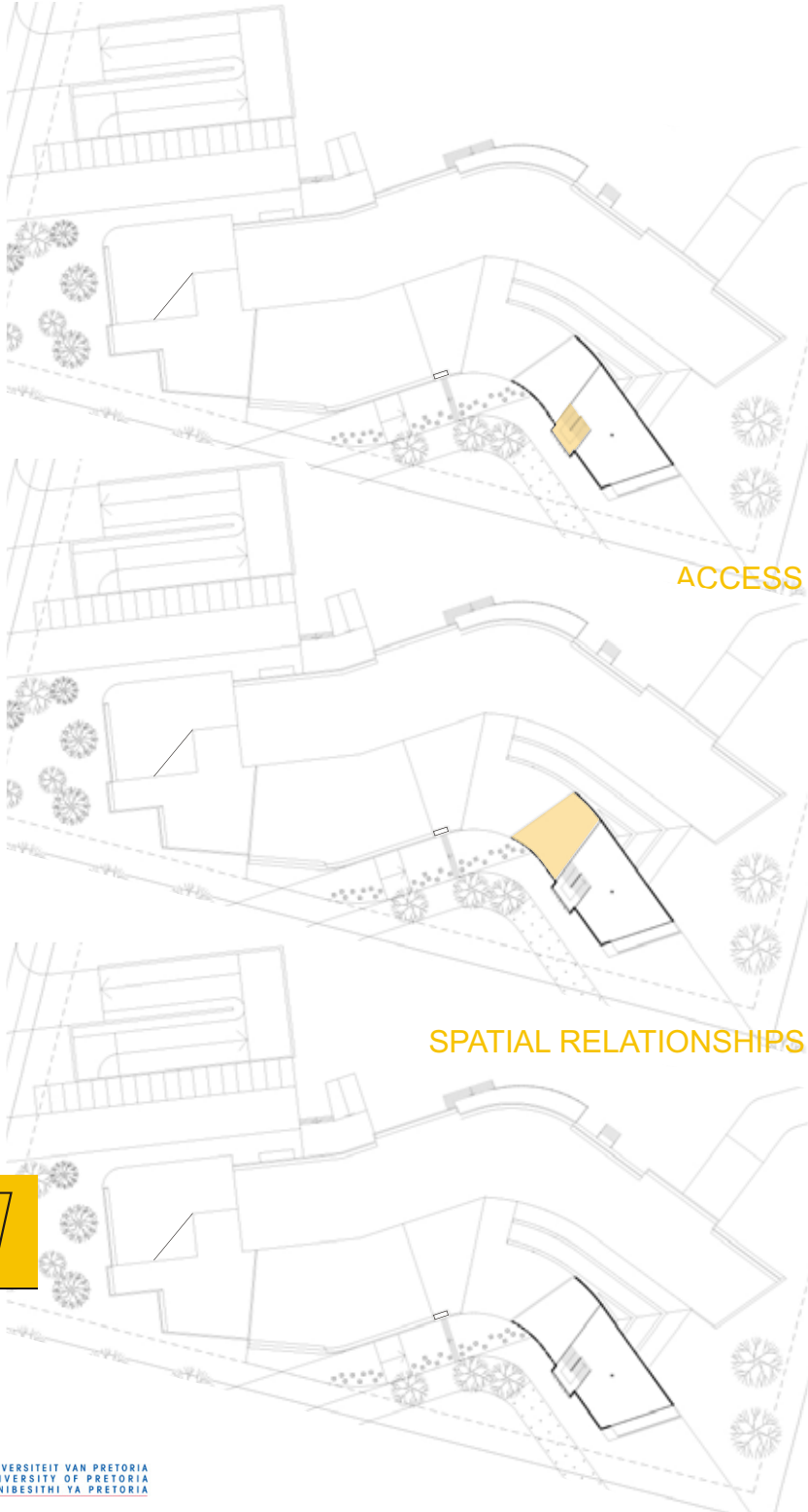
NATURAL LIGHT & VENTILATION

second floor

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Access

The studio space is accessed through a staircase situated in the exhibition space below. The wide enough to form part of the exhibition space in order to decrease the transitional space between the two spaces.

SPATIAL RELATIONSHIPS

This is the studio is for the fine arts and photography individuals. The internal divisions are managed by the creative individuals themselves through the use of moveable partitions and water and drainage points are provided. Indicated is the double volume where the studio will look upon the exhibition space in order to make it part of the exhibition innovative atmosphere, which would inspire the individuals.

Natural light and ventilation

Natural light enters the studio through the glass facade to the southeast. There are windows which open to provide the adequate ventilation for the space.

third floor

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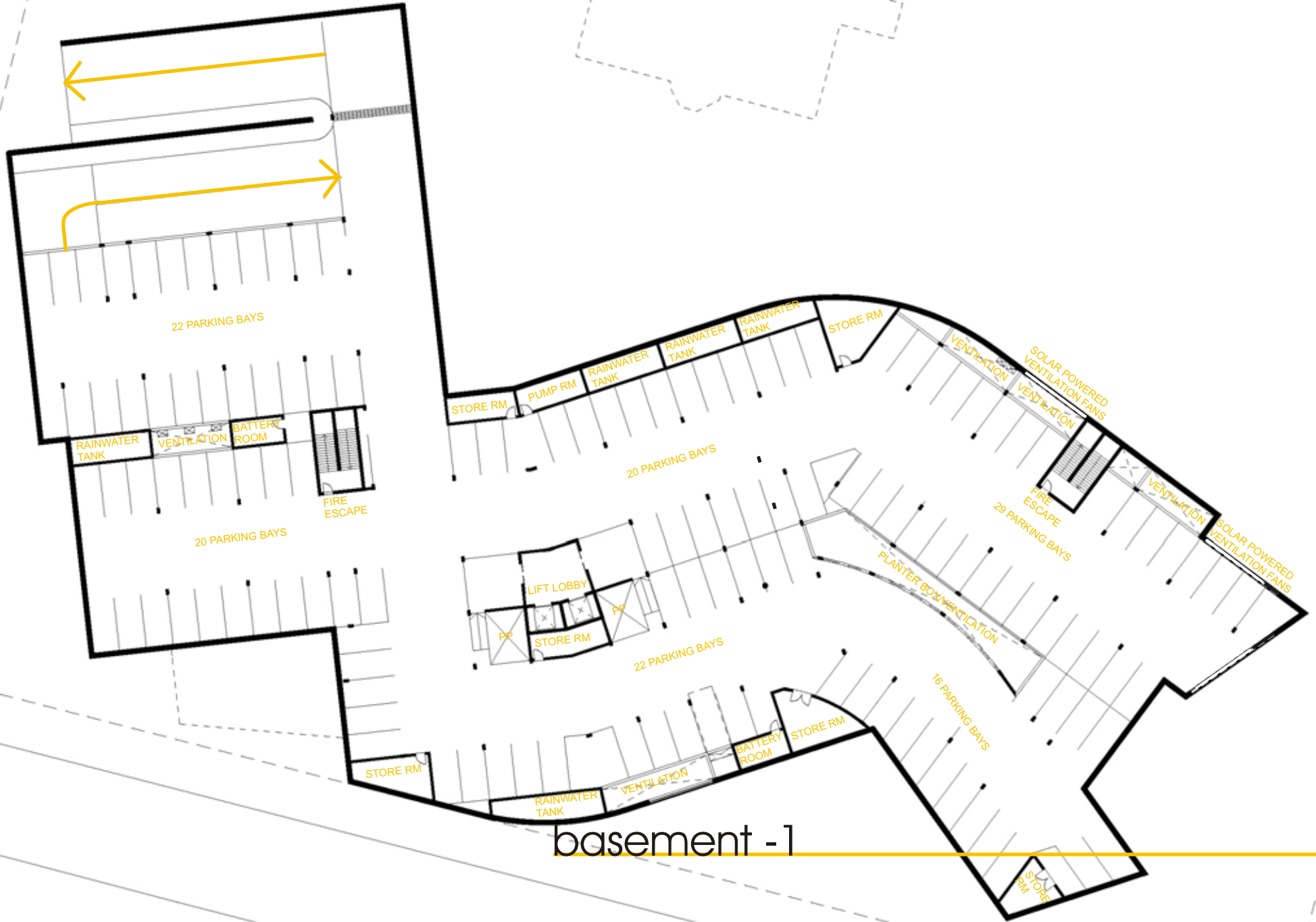


basement -2

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FIG 7-4: BASEMENT -2

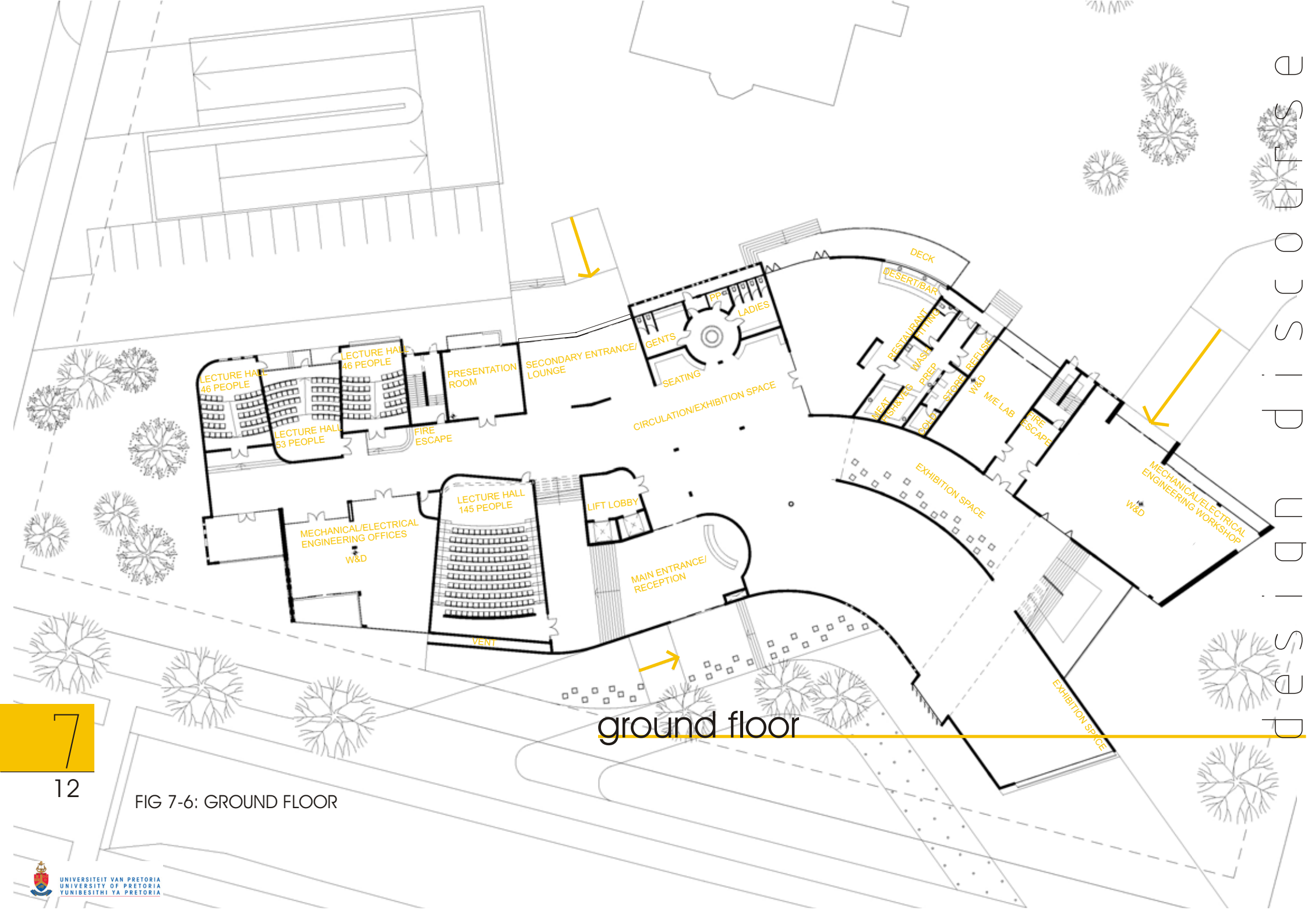


basement -1

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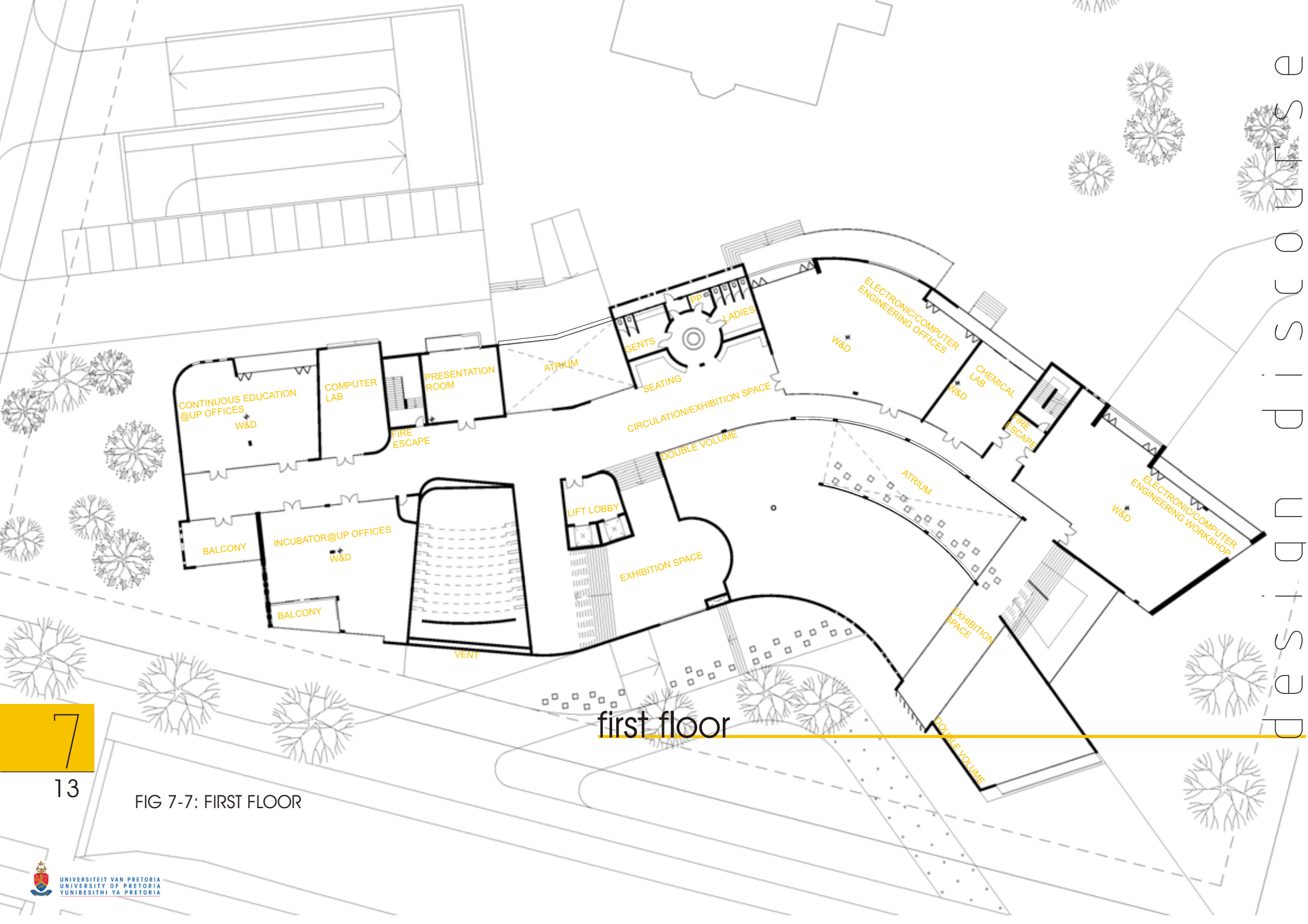
FIG 7-5: BASEMENT -1



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FIG 7-6: GROUND FLOOR

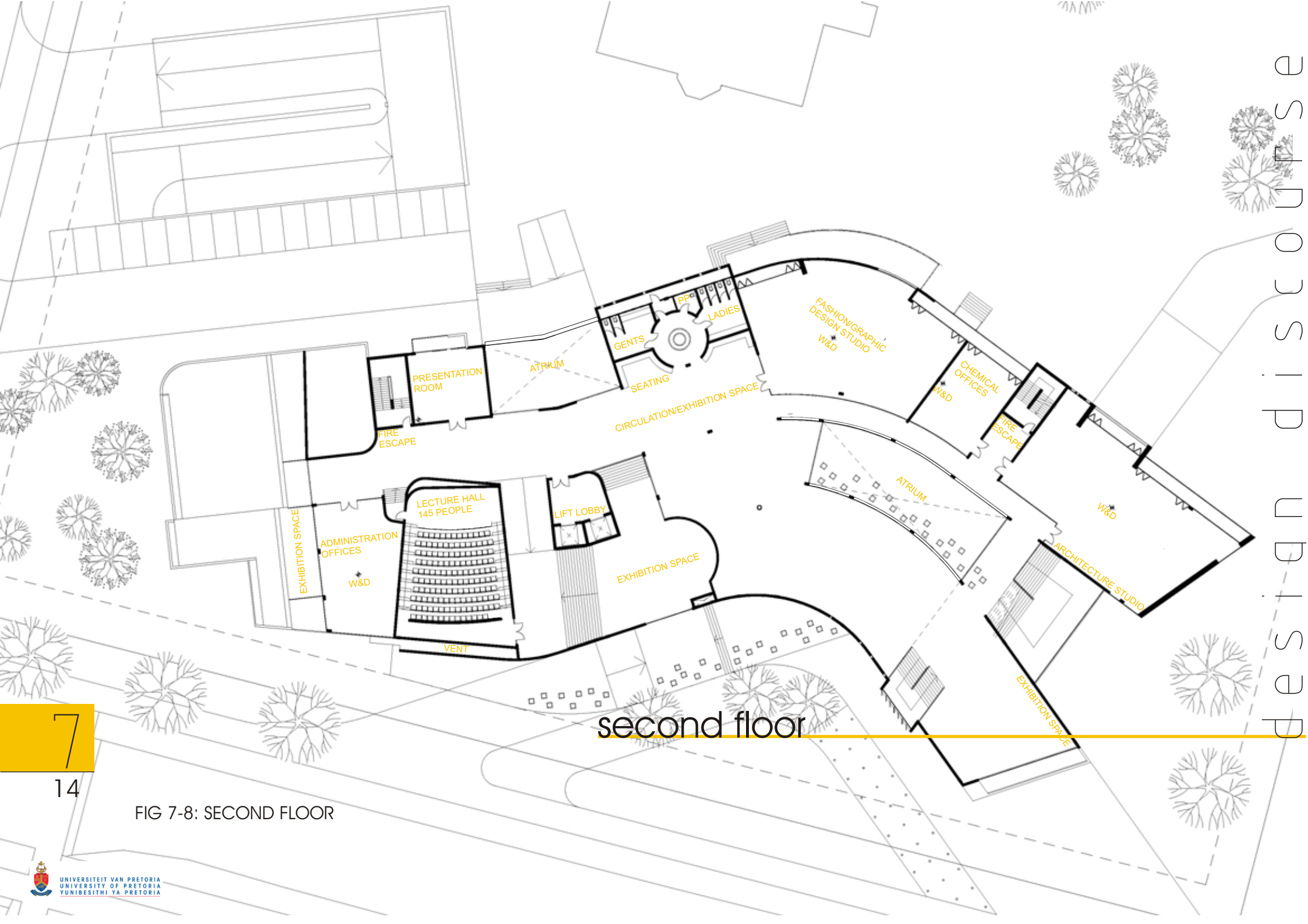


first floor

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FIG 7-7: FIRST FLOOR

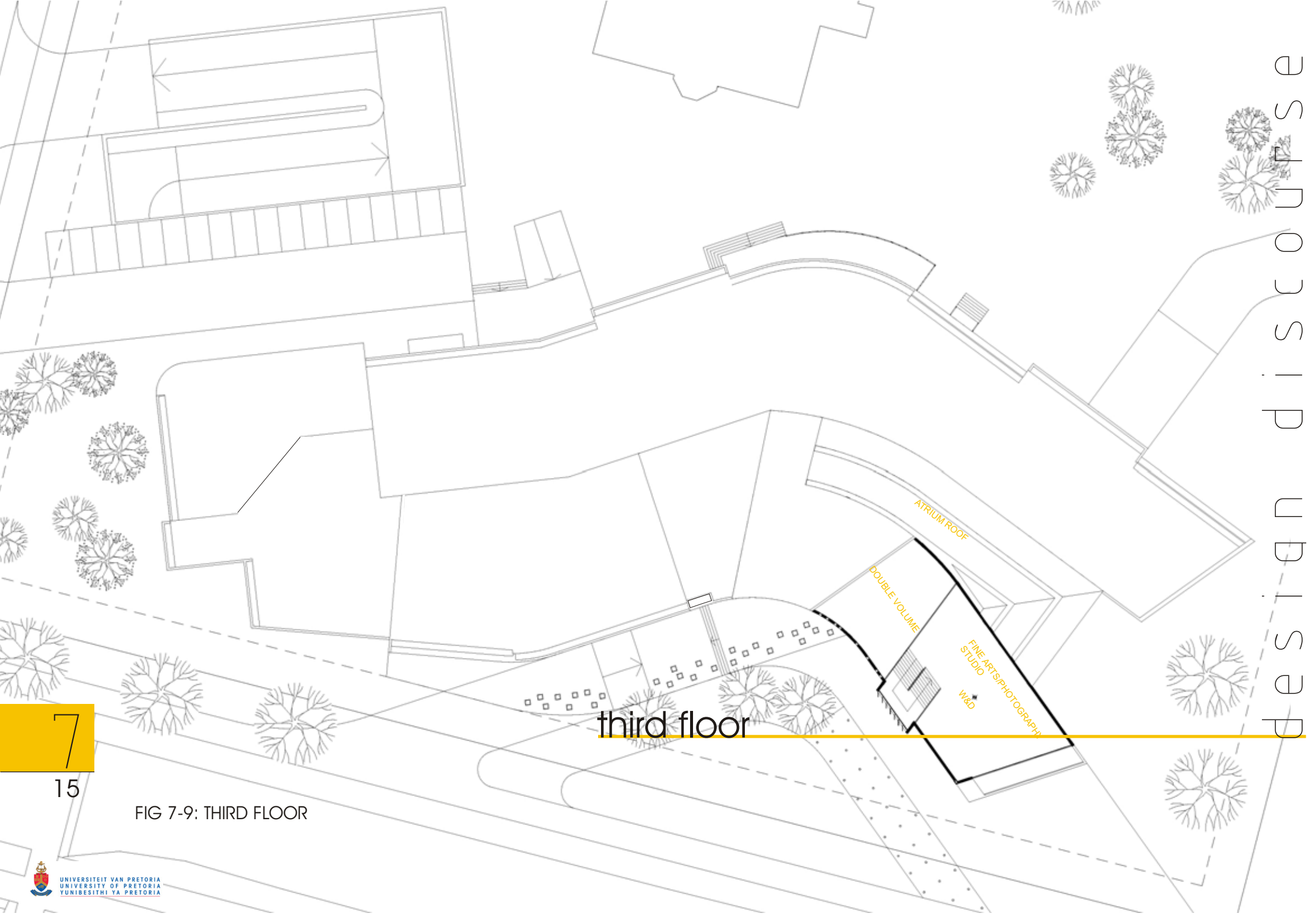


second floor

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FIG 7-8: SECOND FLOOR



third floor

FIG 7-9: THIRD FLOOR



site plan

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FIG 7-10: SITE PLAN



DESIGN DISCUSSION

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eastern perspective

The Glaskas and the Bristow Hall is indicated as well as where the basement entrance is. The green space to the north of the building should not just be used for recreational purposes but should also be an open-air exhibition space. The ramp of the mechanical workshop can be seen as well as the road leading to it, which would also be used for the deliveries of the restaurant. The clerestory glass louvers of the atrium where stack ventilation takes place and where natural light penetrate through can be seen. The public green space to the east serves to be the threshold between the church and the incubator



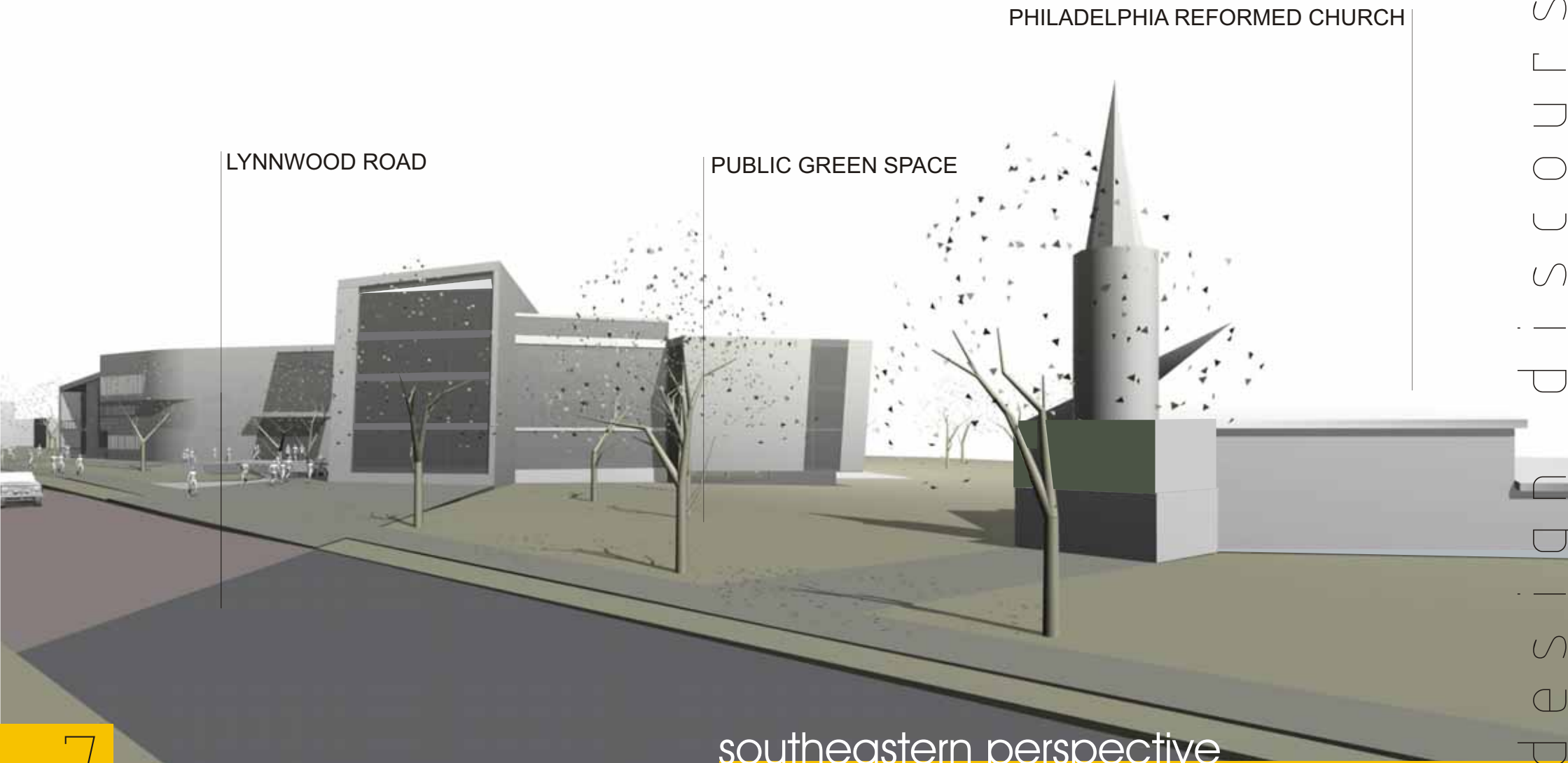
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narrative

The facade speak of a narrative, where the entrepreneur enter the incubator with a concept but must still develop it. He/she also doesn't have a business plan or business management skills in order to make the concept work. Therefore the idea is still fragmented and unresolved. As the entrepreneur moves through the incubation program the idea is formalized and the concept starts getting tangible. Passing through the entire incubator process the concept starts to become a viable commercial product, in order to in the end, produce the final product.



E S J N O U S I P U D I S E P

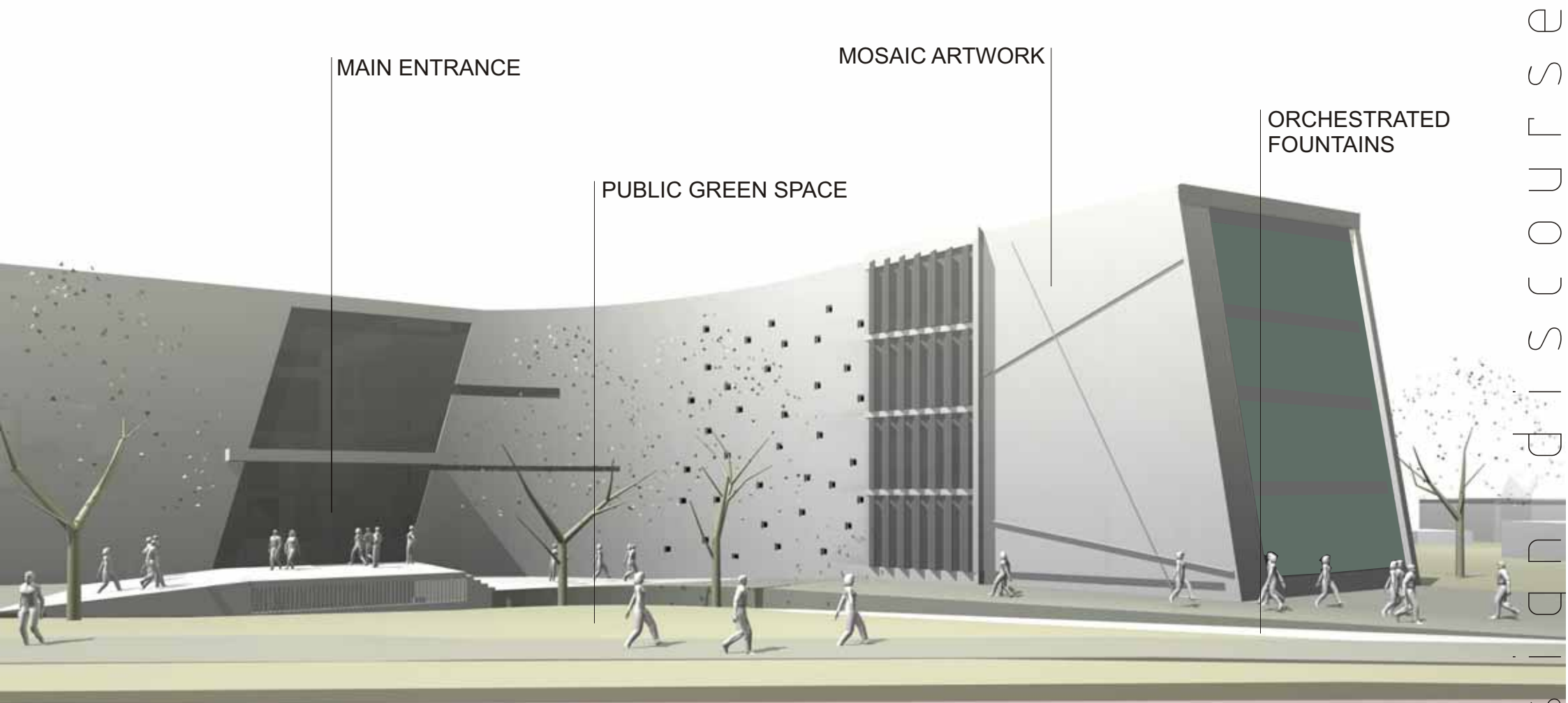
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southeastern perspective

The building contrasts the church through its curvilinear lines and flowing forms, which emphasize the traditional church design in order to give the church more prominent stature. The public green space serves to be the threshold between the incubator and the church in order to respect the presence of the church. The base material is changed as indicated, which draw the attention to the building and serves to indicate the university precinct. This southeastern facade of the building is all about displaying the innovations developed by University of Pretoria graduates.

FIG 7-14: 3D MODEL OF BUILDING



southern perspective

The mosaic artwork on the wall concludes the concept of guiding an innovative thought which represents the final product. This artwork is changed over a period of time which illustrates innovativeness. The main entrance is covered and emphasized through the large butt-jointed glass panel. The louvers are for protection against the western sun. The shape of the building draws people into the site towards the entrance and creates a public green space in front of the building with orchestrated fountains which serve to create an innovative atmosphere.



DESIGN GUIDELINES

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eastern perspective

The glass facade of the atrium faces southeast which eliminates direct northern sun, keeping the building cool. The glass strip on the side of the building is the same width of the church tower in order to acknowledge the church. To the north the correct overhangs are used to let sun in only between March and September.



PUBLIC GREEN SPACE

CORRECT OVERHANGS

northern perspective

The restaurant spills out onto a deck which overlooks the green area. The kitchen of the restaurant serve to provide for catering events as well. The green space, used for recreation and an open-air exhibition space, is also utilized as a catering space for events. The sun is controlled through the correct balcony and roof overhangs.



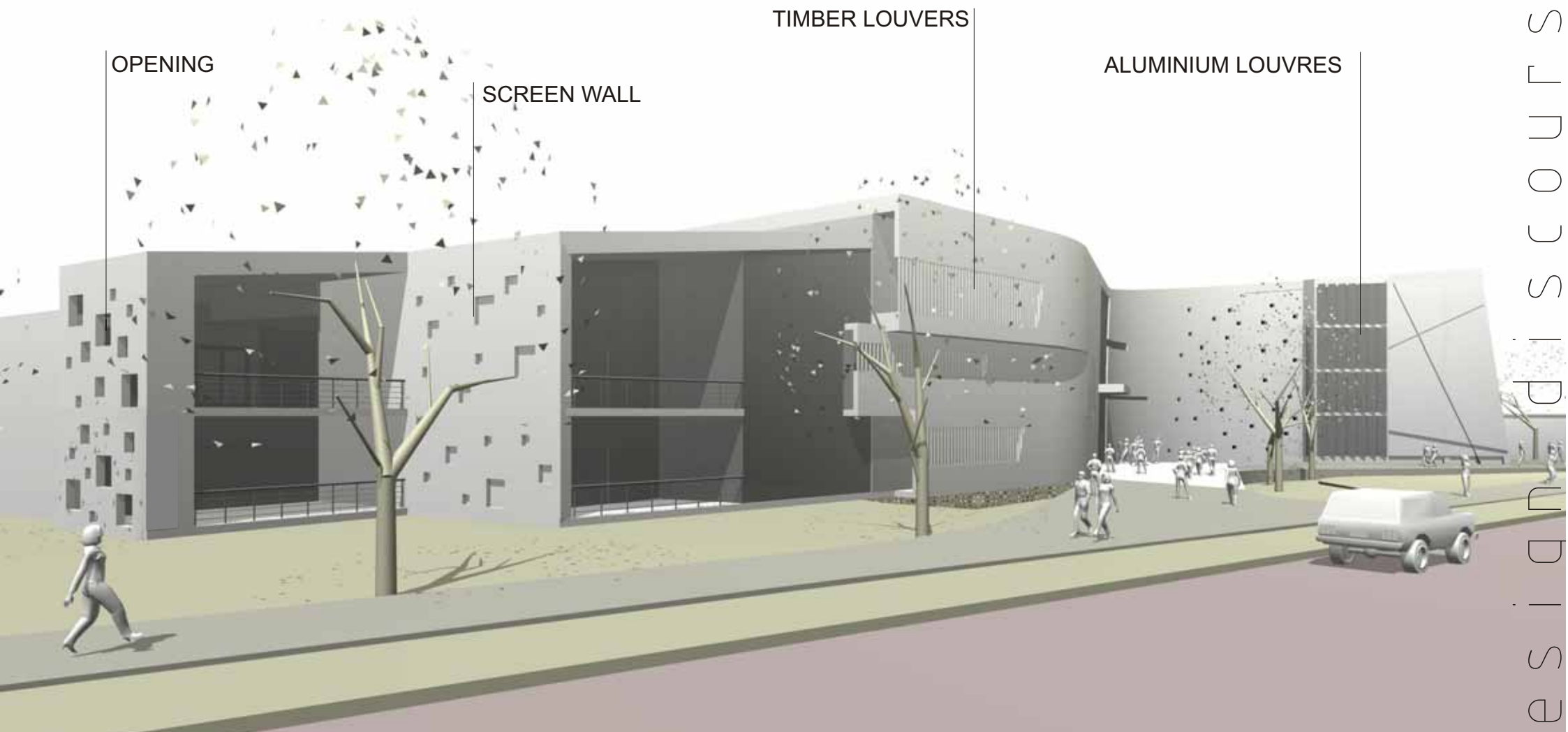
northern perspective

The toilet windows and drain pipes are hidden behind a screen wall which is ventilated to the outside through openings. The screen wall is decorated with mosaic artwork which can be changed over a period of time to emphasize the idea of innovation. Natural anodized aluminium louvers are used at for the atrium above the secondary entrance/lounge in order to achieve the correct protrusion for sun control.



northern perspective

The bottom louvers at the left lecture hall are closely spaced in front of a glass facade, for sun control purposes as well as to be able to close it completely for presentation purposes. The middle lecture hall has a glass facade at the back with the correct balcony overhang covering it. Blinds to the inside of the lecture hall is used to control the amount of natural light. The lecture hall to the right as well as the space at the top have windows which has adjustable aluminium louvers to the outside to control direct sun light. The louvers can be closed completely in order to eliminate natural light.



DESIGN DISCIPLINES

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southwestern perspective

The southwestern facade represents the fragmented beginning when starting at the incubator. The sun that penetrates the openings to the west will fall on the next wall and would not enter the building. The western sun is screened from entering the building through solid walls or aluminium vertical louvers. The timber louvers provide ventilation to the two large lecture halls. Air will flow from the cool southern side of the building into a shaded vent, from there it flows over a rock bed to be cooled further and be utilized. This system is illustrated under the systems.