



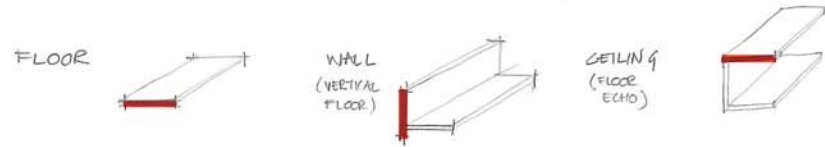
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## Chapter 6

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KINETIC ARCHITECTURE

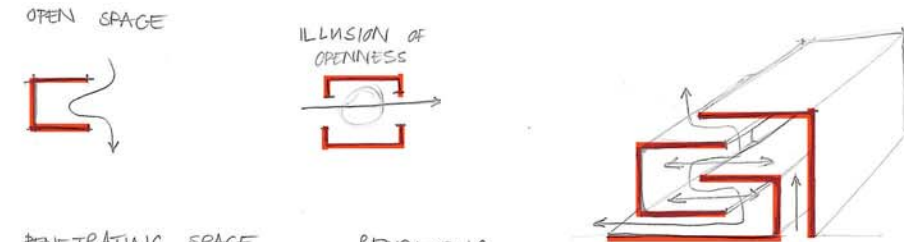
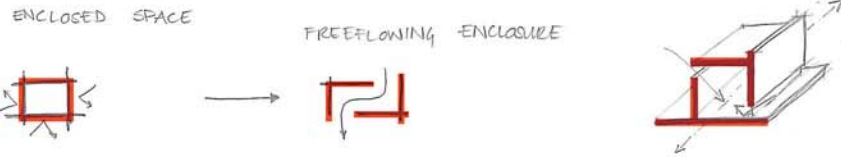
TECTONIC = FUSION OF — TECHNIQUE & ART  
— CONSTRUCTION & POETRY



"In temporary architecture I explore the journey. Through the journey you arrive at the idea of variations and you learn that these are as important as the final results..."

The end result is no more than a more defined vibration that grows out of all changes that have been between the initial project and the final construction."

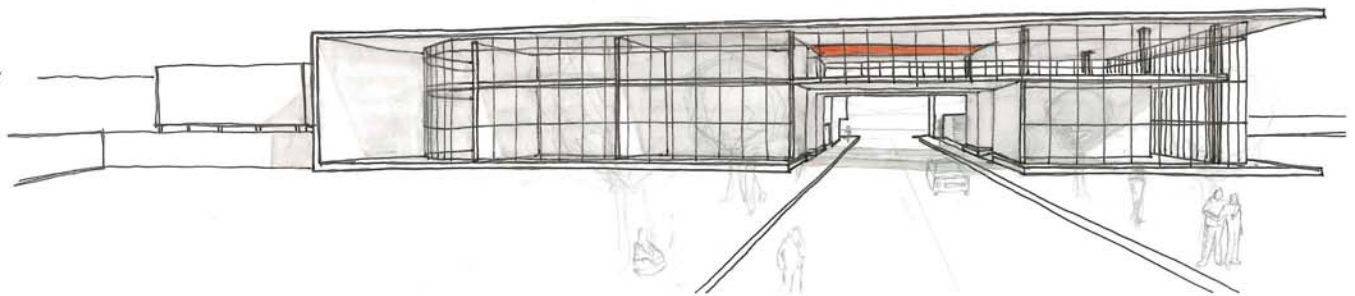
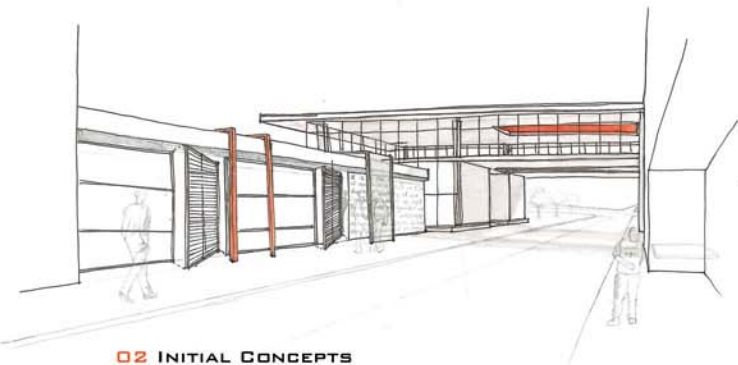
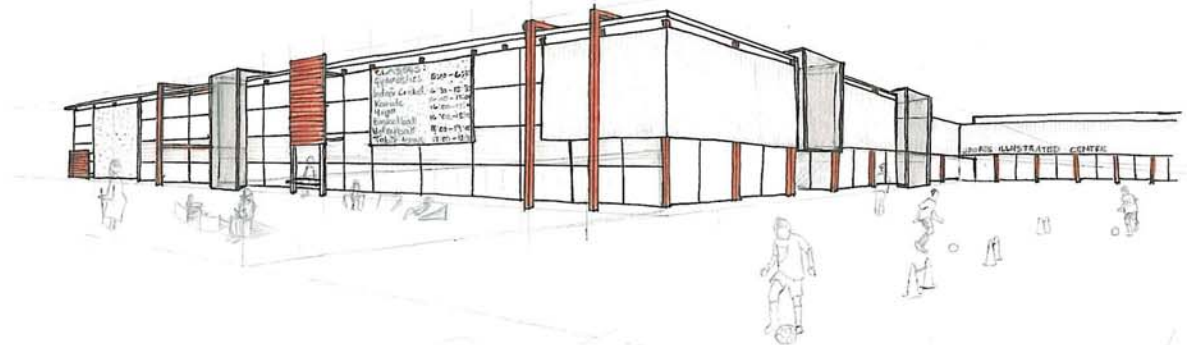
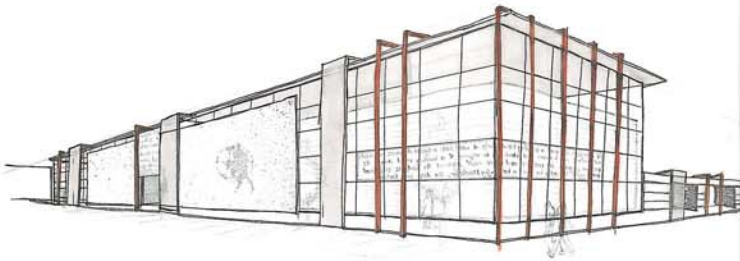
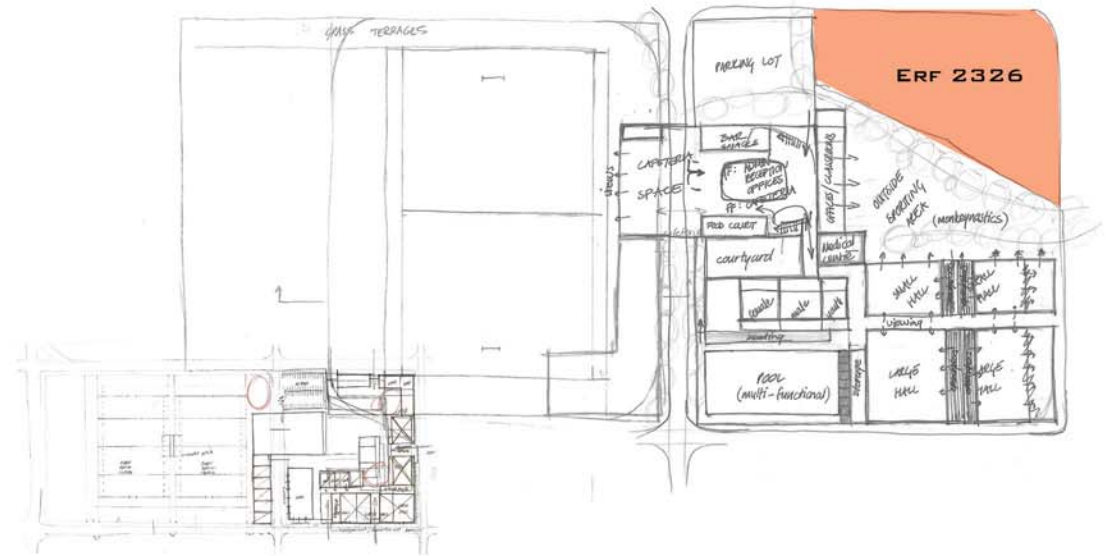
- Enric Miralles Miralles, E. : 2000



During the initial site development, the author was unsure about the inclusion of Erf 2326. However, the motor repair shop's 30 year lease has expired and they are planning a move to Visagie Street (Pretoria inner city). The unnatural site deviation is attributed to the 1967 Freeway Proposal. (Bruinette, K.E.:1967) According to municipal officials, Munitoria plans to demolish the building in order to make room for future development. (Joubert, A.:2007)

The factors mentioned above, provided an opportunity to reinstate the rectangular grid, typical of Pretoria CBD.

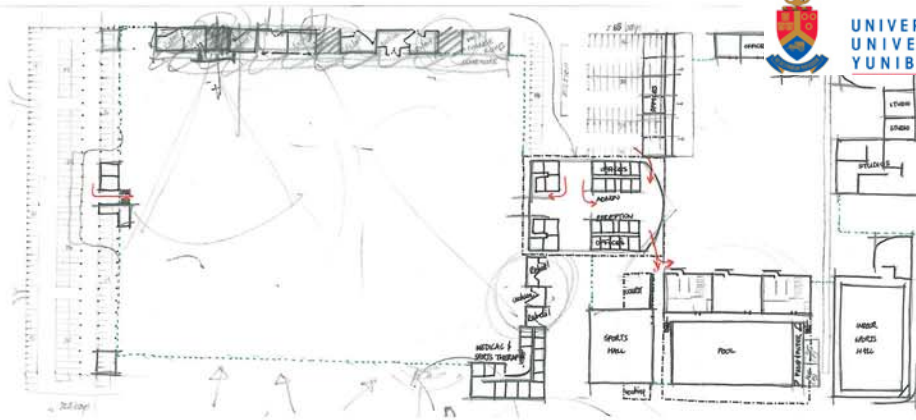
It was important to promote interaction between interior function and exterior pedestrian, onlooker or spectator. This was achieved by giving attention to active facades, screening and a translucent building structure.



02 INITIAL CONCEPTS  
VISUALS BY THE AUTHOR : 2007

## 6.1.1 INITIAL CONCEPTS

### 6.1 Horizontal Gymnastics



The *Heritage Route* runs through the centre of the site. This creates opportunities to locate a point of arrival, especially from Proes and Struben Streets (that are one-way feeders to the site). A taxi drop-off zone and bus stop are functional requirements along the route.

Jerusalem Street, that runs through the site, connects to Marabastad's business centre and *Belle Ombre Station*. This street will largely be pedestrianised, whilst still allowing limited access for public/transport vehicles.

On an adjacent site bordering Cowie Street to the east, a *Green Square* is proposed. This 'lung' is extended to connect with the centre *Heritage Route*. Passengers will disembark from their busses at this junction, enter the site, and negotiate their way past the cafeteria towards the different functions. Other access points to the centre, stadium and sports fields exists, but *controlled access* and *safety* were aspects of major concern.



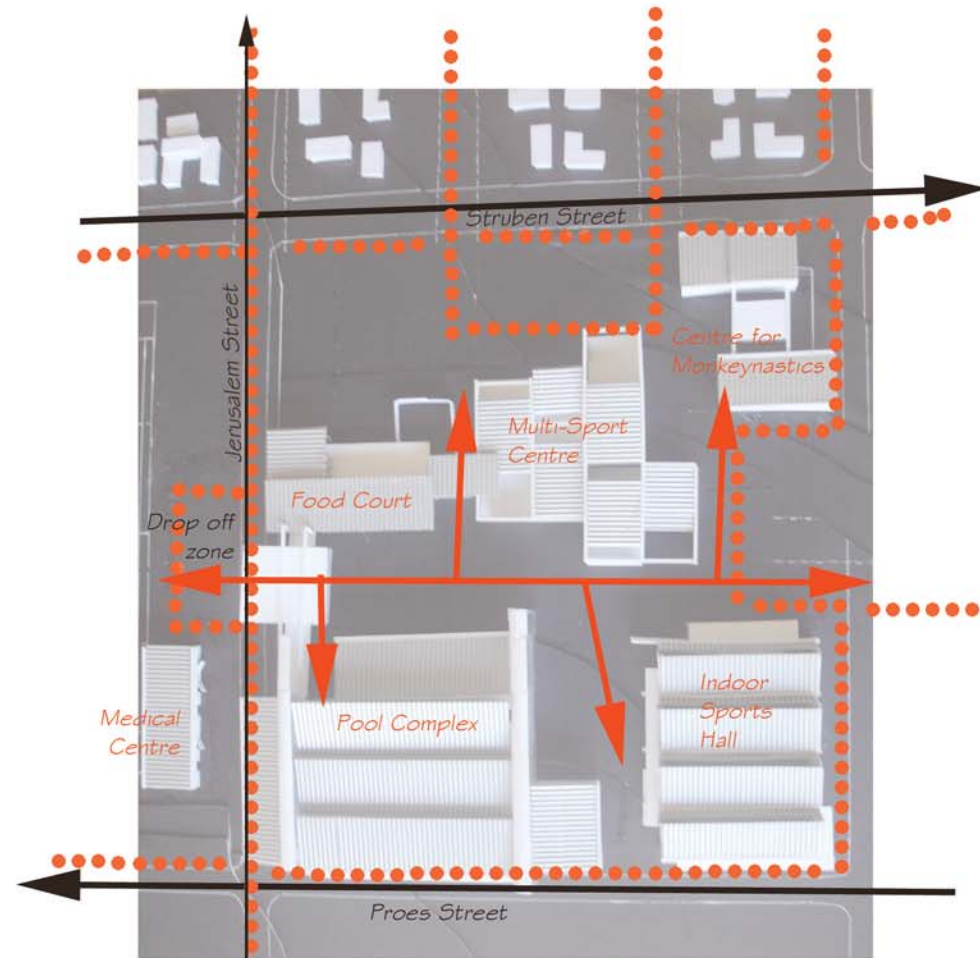
MOVEMENT PLAN - NOT TO SCALE



- Pedestrian Movement
- User Access
- Vehicular Movement



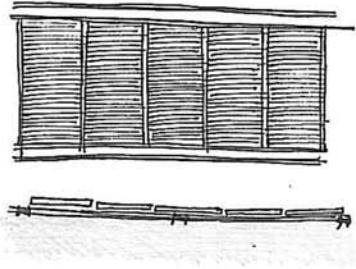
MOVEMENT PLAN - NOT TO SCALE



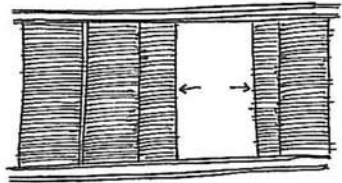
04 MOVEMENT ANALYSIS  
MODEL BY AUTHOR : 2007

### 6.1.2 CONCEPT DEVELOPMENT

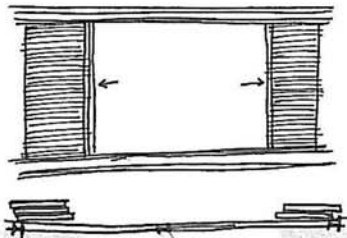
## 6.1 Horizontal Gymnastics



**SOLID FACADE:**  
MINIMAL LIGHT EMISSION



**SEMI-SOLID FACADE:**  
MEDIUM LIGHT EMISSION



**OPEN FACADE:**  
MAXIMUM LIGHT EMISSION

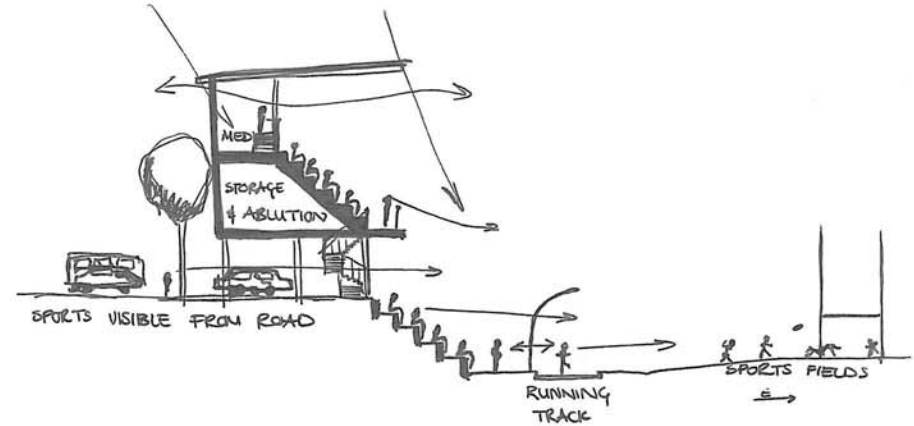
**05 STRUCTURE ADAPTING TO SUNLIGHT**  
SKETCHES BY AUTHOR : 2007

Light quality within a building can be controlled by proper louvre design. The western aspect of the site is relatively exposed and needs proper design consideration. In an attempt to avoid solid western walls, sliding louvres and translucent sheeting are proposed, this will allow sunlight in, whilst avoiding glare and heat storage. The louvres can be adjusted throughout the day for different seasons to achieve climatic control.

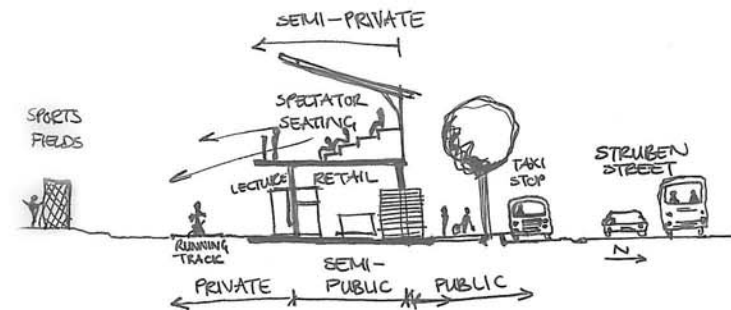
During winter time, the double facade of louvres and curtain wall panels provide warmer interiors. Alternatively, during summer time, the opening profiles within the glass facade create the opportunity to let the hot air out while the louvres can be closed for protection against the sun.

Visual links between interior and exterior are investigated, as well as between the different functions within a building. The hierarchy of involvement is addressed by controlling the circulation flow from public to private spaces.

Transparency was an important aspect, making the activities within the structure visible from the street. Thereby including and intriguing the passing community.

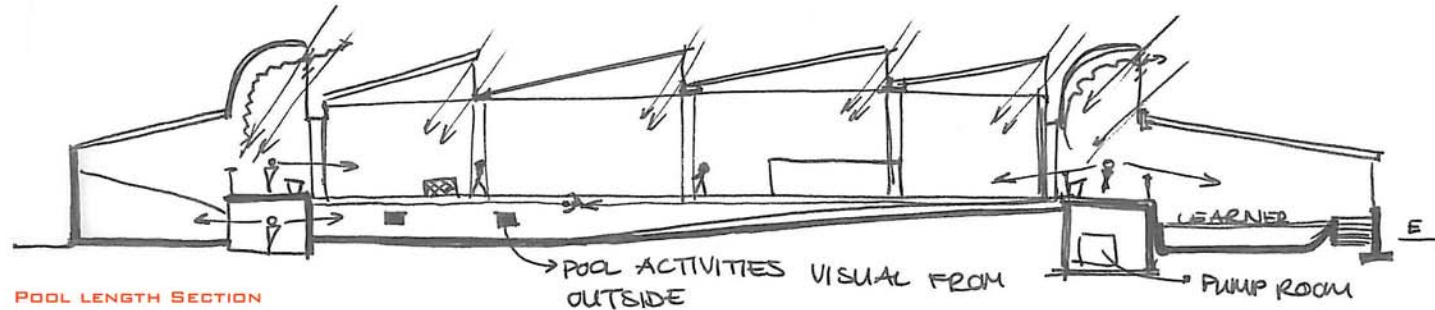


**TYPICAL SECTION OF THE STADIUM**

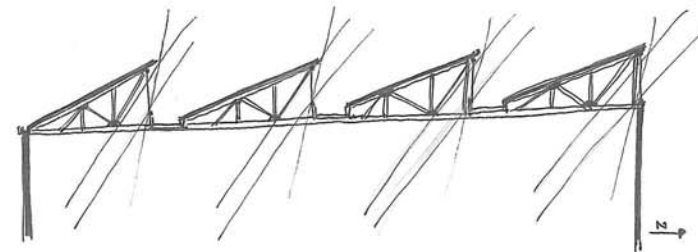
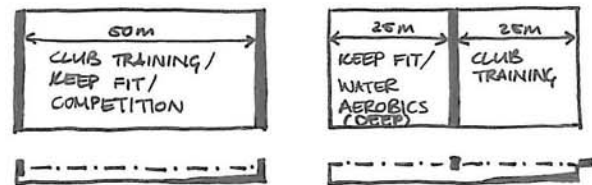


**RETAIL ALONG STRUBEN STREET**

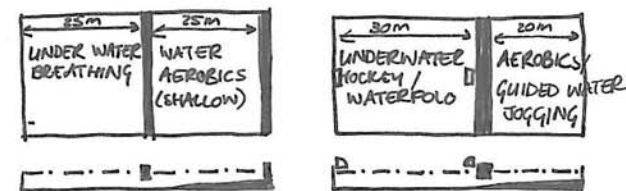
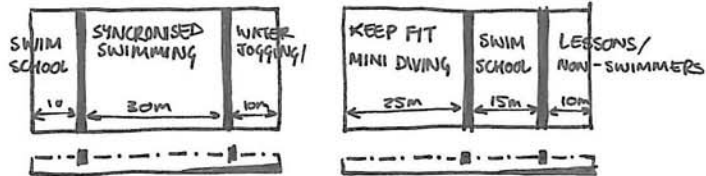
**06 VISUAL SPORTS**  
DIAGRAMS BY AUTHOR : 2007



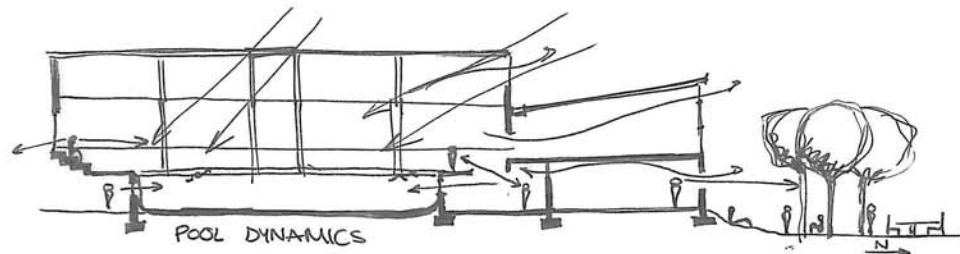
POOL LENGTH SECTION



POOL ROOF TUSSES



WATER GYMNASTICS



POOL WIDTH SECTION

The pool complex was designed to allow for views in from street level. This again creates the opportunity for interaction between exterior and interior. Another design opportunity is found in the reflective light through open walkways and the curved roof structure.

The curved roof with louvres on the vertical support, accommodate possible build up of humid air within the structure.

The 50m pool can become flexible via the application of two laterally moving bulkheads. These pool dividers allow for different activities at different times of day.