

CHAPTER FIVE

- 5. Design Refinement
 - 5.1 Defining an Architectural Language
 - 5.2 Precedent Studies
 - 5.2.1 Baragwanath Transport Interchange and Traders Market, Johannesburg
 - 5.2.2 The Metro Mall Taxi Rank, Johannesburg
 - 5.2.3 Thusong Service Centre, Khayelitsha
 - 5.2.4 Hermanus Community Day Centre, Hermanus
 - 5.2.5 Plastic View Architectural Language

Figure g. Contextual photo in Plastic View (Author 2016)

5. DESIGN REFINEMENT

In review of the mid-year evaluation, a number of aspects to the dissertation were considered in order to further refine the project design before investigating the technical and sustainable aspects to the project. The first consideration reviewed the accommodation schedule and specific utilities required to adhere to the mandatory procedures specified by national healthcare facility standards and regulations, for example, room sizes in order to sufficiently accommodate the procedures undertaken within each room; pharmaceutical delivery space requirements and service utilities requirements (CSIR 2013). This investigation was informed by the principles laid out in the IUSS Health Facility Guides: Primary Healthcare Facilities (CSIR 2013), which were considered critically so as to fit in with the argument and approach laid out in the previous chapters.

Refined Accommodation Schedule:

A. Community Interface:

-COPC healthworker's office	112 m ²	
-Community meeting rooms	42 m ²	x3
-Openable meeting/conference room	78m ²	x1
-Community training rooms	42m ²	x5
-Residential units for abused patients	42m ²	x3
-Reception area for community activities	42m ²	x1
-Residential unit for nurse/warden	50m ²	x1
-Public restaurant & kitchen	132m ²	x1
-Vegetable garden	112m ²	x1
-Ablutions	70m ²	x8
-Staff Ablutions	30 m ²	x4
-Staff change room with shower	35 m ²	x1
-Organic waste disposal	30m ²	x1

B. Clinic:

-HIV/TB consultation rooms	16 m ²	x1
-HIV/TB training consultation rooms	19 m ²	x3
-HIV/TB sub waiting area	24 m ²	x1
-Mother and child consultation rooms	16 m ²	x2
-Mother and child training consultation rooms	19 m ²	x2
-Mother and child sub waiting room	24 m ²	x1
-Chronic diseases consultation rooms	20 m ²	x3
-Chronic diseases sub waiting room	50 m ²	x2
-Emergency ward and holding room	20 m ²	x3
-Emergency ward sub waiting room	32 m ²	x1
-Reception for emergency ward	12 m ²	x1
-Drug room for emergency ward	6 m ²	x1
-Dirty utility/clinical disposal room	54 m ²	x1
-Storage rooms	18 m ²	x2
-X ray room and Plaster of paris room	42 m ²	x1
-Vitals room	24 m ²	x2
-Records & records return	36 m ²	x1
-Reception	12 m ²	x1
-Help desk	23 m ²	x1
-Vegetable sales area	22 m ²	x1
-Pharmacy; clinic and public outlets	50 m ²	x2
-Pharmacy store	60 m ²	x1
-Clinical supply delivery zone	64 m ²	x1
-Ablutions	42 m ²	x5

The second, and most important consideration which was reviewed after the comments received in June, was the architectural language of the project. As mentioned previously, these comments suggested that at this stage, the language of the proposal was not successfully conveying the intentions and concepts laid out in the initial argument on a spatial level. Therefore the focus of the design development and refinement shifted towards defining a language which corrected this issue.

5.1 DEFINING AN ARCHITECTURAL LANGUAGE

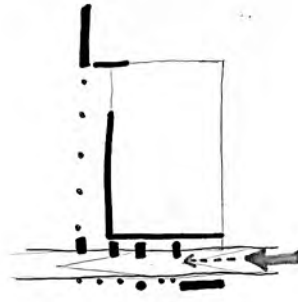
As explained previously, the initial approach to defining an architectural language for the facility was influenced by the principles put forward by Cooper Marcus and Barnes (2005) and the text *Active Design: Shaping the Sidewalk Experience* (2013).

As the result of this approach did not lend itself to the intentions of this dissertation, it was decided that this language should be enriched by a similar method of analysis that was used to define the aforementioned building footprints laid out in the urban vision. This method of analysis, influenced by theories suggested by Alexander (1964), Salat (2011) and Steyn (2005) involved using the spatial principles found in informal settlements as precedents for design (see chapter three). The intention in this instance however, was to apply these theories not only to the architectural language used in the existing built context of Plastic View, but also to the architectural language used in several other local urban public projects.

In order to make sense of these precedent studies, the research process looked to the theories put forward in Juan Pablo Bonta's book *Architecture and its Interpretation: A Study of Expressive Systems in Architecture* (1979) which defines the role of an architectural language in design, and how it is established and interpreted within society. These precedent studies were then analysed in the same way as Bonta considers a number of case studies in his book (Bonta 1979: 63).

5.2 PRECEDENT STUDIES

The street edges and facades of this proposal were seen as the main area of concern for this re-imagined language, and so these precedent studies were analysed with the specific aim of considering resolution of edges and public interface in order to conclude an understanding of the architectural language used in each precedent.



5.2.1 BARAGWANATH TRANSPORT INTERCHANGE AND TRADERS MARKET, JOHANNESBURG.

Ludwig Hansen Architects and Urban Designers. 2003-2008.

The north western facade of this project was specifically chosen to be analysed as it exhibits a strong pedestrian movement edge adjacent to a busy vehicular road.

What was noted in this case was that the roof appears to be the element that ties all the other forms together. A solid vertical element that is similar in nature to the other vertical elements on this facade, but contrasting in width is then responsible for announcing the entrance/start of the corner of the building under this roof element. This facade of vertical elements then appears to be layered with a secondary horizontal line behind the columns which appear to humanise the scale of these columns on one edge.

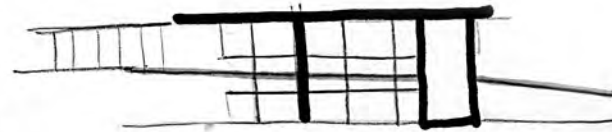
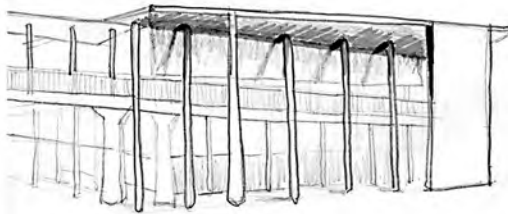
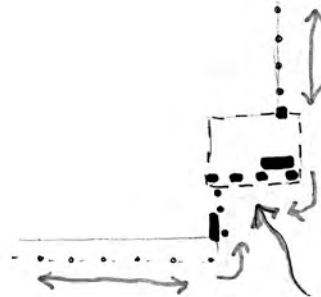


Figure 62. Bara Taxi rank architectural language analysis drawings (Author 2016).



5.2.2 THE METRO MALL TAXI RANK, JOHANNESBURG.

Ludwig Hansen Architects and Urban Designers. 2000-2001.

As this project was done by the same architectural firm as the previous case study, a couple of similarities in terms of language is recognisable between the two. For example, the entrance to the mall is emphasised and highlighted by a contrasting feature element on the facade and the corner to this entrance is framed by wider vertical element that portrays a similar language to the other vertical elements on either facade. This case study also makes use of a layered facade along the public movement edges. This edge, made up of closely spaced vertical elements is bound together by an overhang that introduces a strong horizontal line responsible for humanising the scale of this edge.

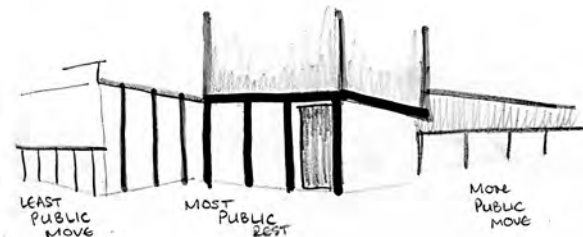
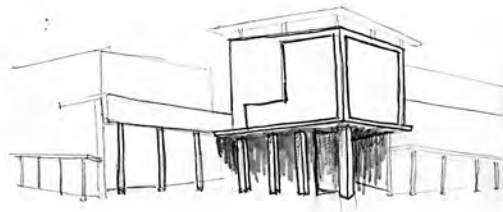
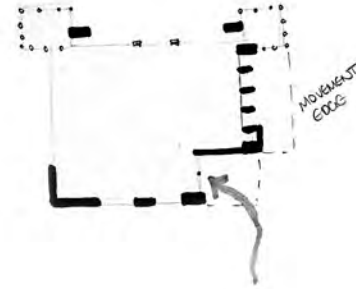


Figure 63. Metro Mall architectural language analysis drawings (Author 2016).



5.2.3 THUSONG SERVICE CENTRE, KHAYELITSHA. Makeka Design Lab. 2008.

What was noticed in this project was the emphasis given to framing each facade as a separate entity, in other words, contrasting forms within a system in order to develop a language (Bonta 1979:123). The language used on each of these facades then suggests the functionality of that facade, such as the service facade which differs in nature to the public entrance facade.

Similarly to the previous two case studies, this public entrance facade highlights the main entrance using a solid concrete section that sits in contrast to the remaining glazed sections of the facade, and an overhang over the entrance suggests a space of arrival.

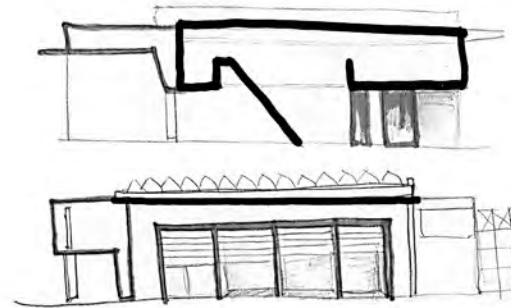


Figure 64. Thusong service centre architectural language analysis drawings (Author 2016).



5.2.4 HERMANUS COMMUNITY DAY CENTRE, HERMANUS. Gallagher Lourens, 2015.

This case study was chosen in order to analyse the language of a facility which exhibits similar principles to those stated in the concept and arguments of this dissertation. While the aesthetic of the building suggests robustness and functionality, the human scale is again emphasised by a strong horizontal line hosting finer vertical elements within it. And as is found in the other case studies above, the entrance space is immediately recognisable as being in contrast to the other elements found on the same facade.



Figure 65. Hermanus community day centre architectural language analysis drawings (Author 2016).

5.2.5 PLASTIC VIEW ARCHITECTURAL LANGUAGE

In this case study, the language is informed by the structural system used in the structures. This structural system, populated with infill wall panels, then alternates between being hidden or exposed. The degree of social interaction between the structure and the street is dependent on its function, as illustrated in previous analytical diagrams (see page 53).

Having made the above observations, the following informants were introduced into the design in order to arrive at a more appropriate architectural language. These informants include; firstly, the use of horizontal and vertical lines in order to define the functionality of specific edges for example, horizontal emphasis with finer vertical elements will reflect a pedestrian quality due to definition of a human scale. Secondly, important entrances are to be highlighted and emphasised by contrasting the entrance space to other elements on the same facade, also these entrances are to suggest a place of arrival through the incorporation of a porch typology. Thirdly, service cores are to be consolidated and stereotomic in nature, and lastly, the corners of the design are to be defined by stronger elements that appear to frame and contain each facade which reflect their different functionalities.

The structure of the building is then intended to reflect the architectural language present in Plastic View, which is discussed in the following chapter.

These informants were then investigated on both plan and elevation and iterated a number of times in order to refine the language of the project.

These iterations are shown on the following pages together with the original iteration of the elevations from the mid year evaluation.



Figure 66. Floor plan investigations as a part of the elevational development process (Author 2016).

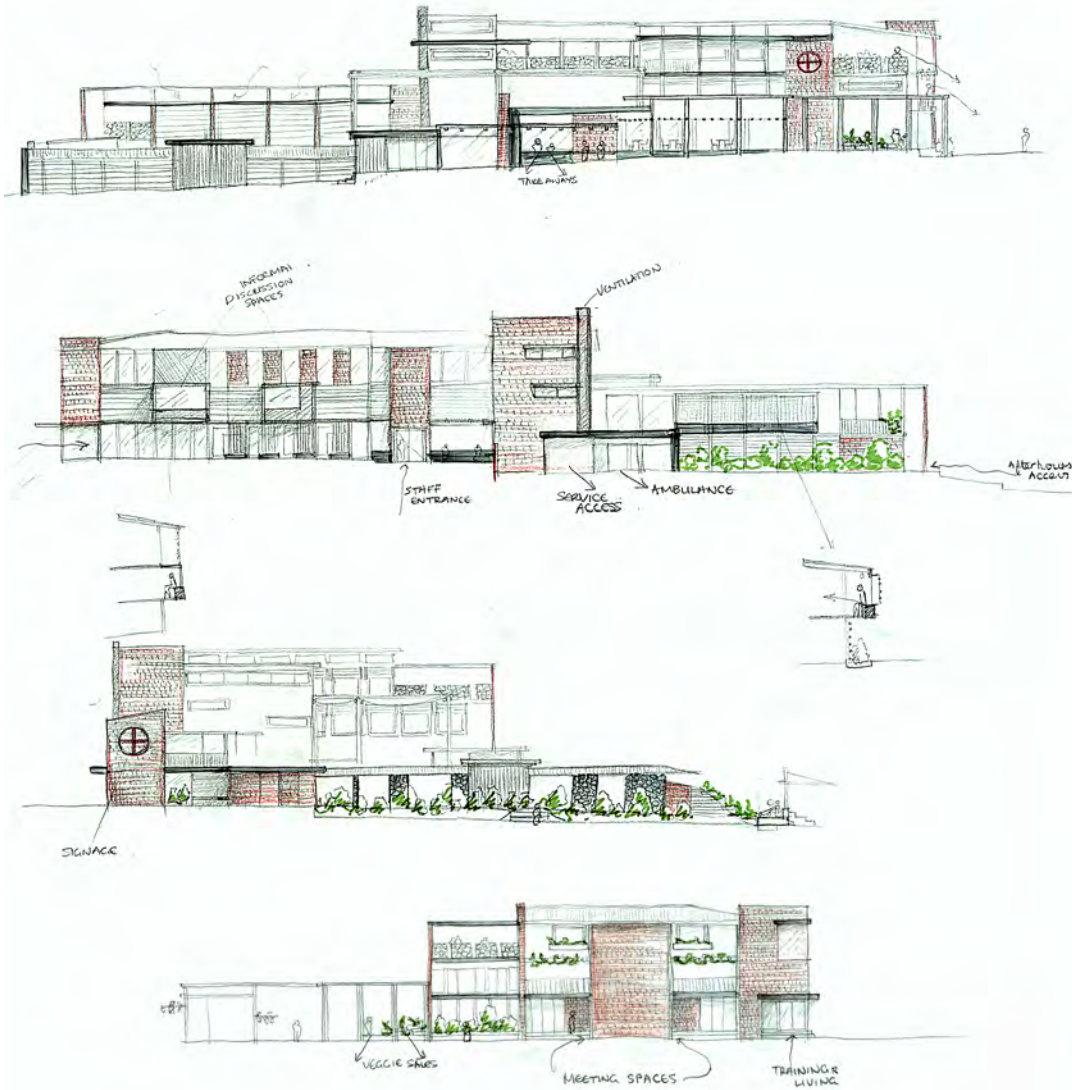


Figure 67. Elevation language iteration 1. Investigating the effect of materiality and texture when applied to the elevations put forward in the June evaluation (Author 2016).

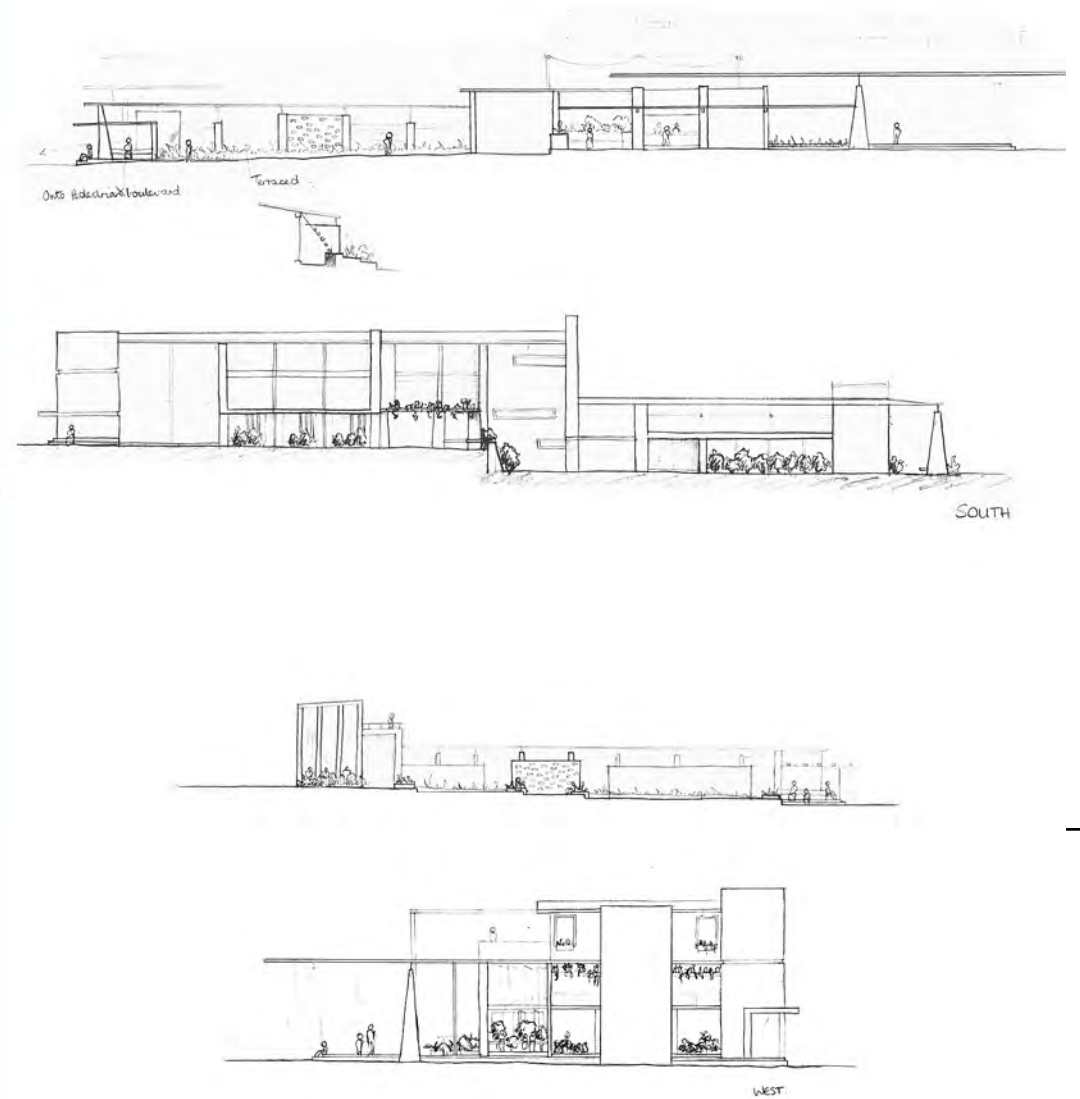
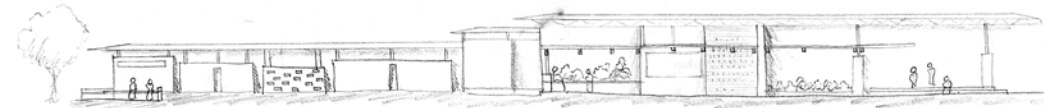
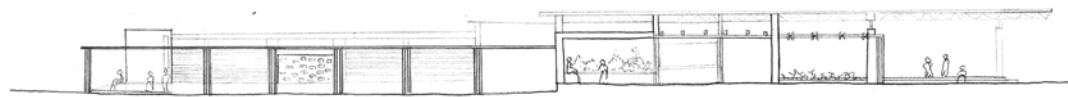


Figure 68. Elevation language iteration 2. First attempt at redefining an architectural language for the facility after conducting the aforementioned precedent study (Author 2016).



er to journal for language

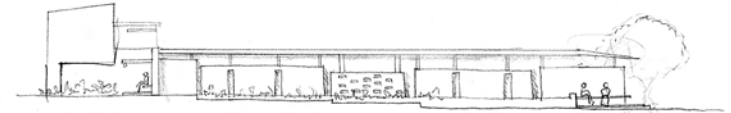
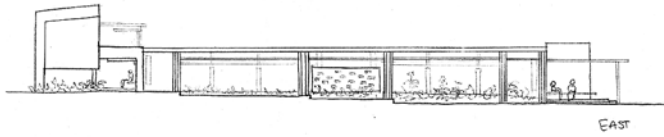
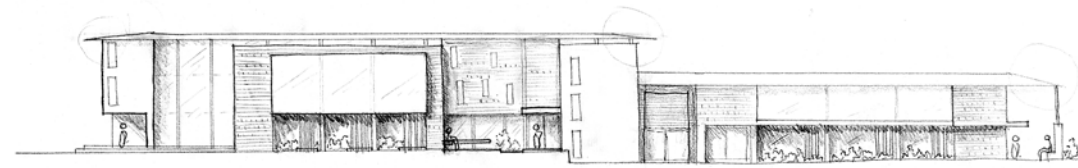
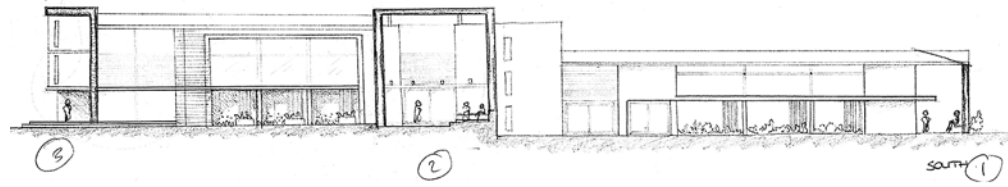


Figure 69. Elevational language iteration 3. Refining the architectural language of the facility presented in iteration 2 after conducting the aforementioned precedent study (Author 2016).

Figure 70. Elevational language iteration 4. Final proposed architectural language before applying the technical and sustainable lenses to the dissertation (Author 2016).