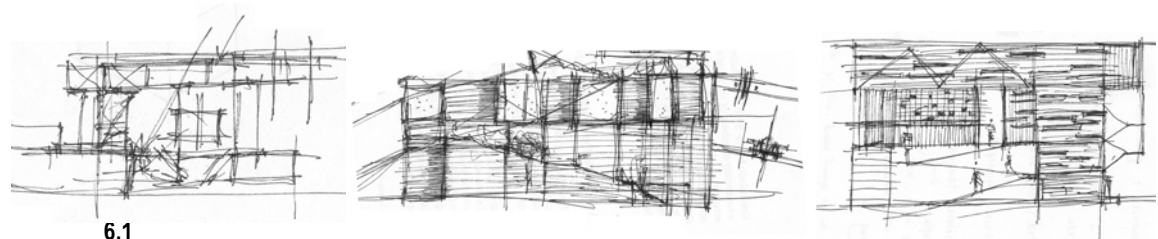
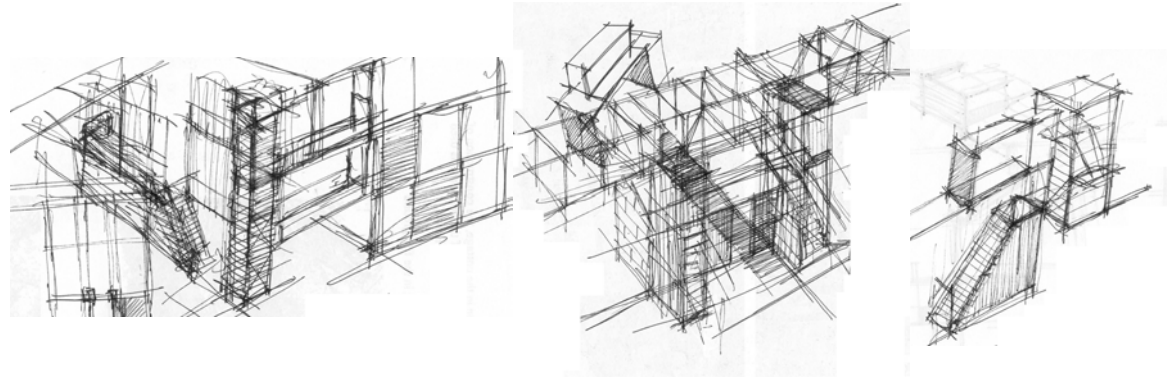
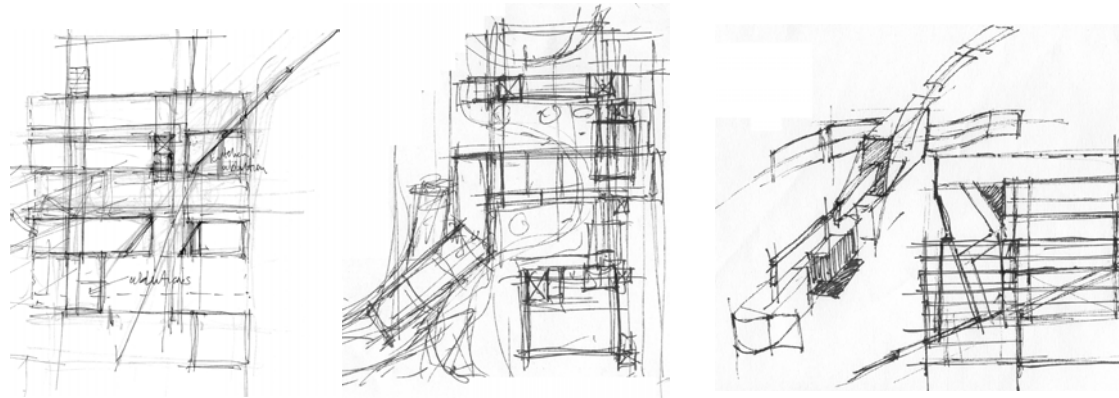
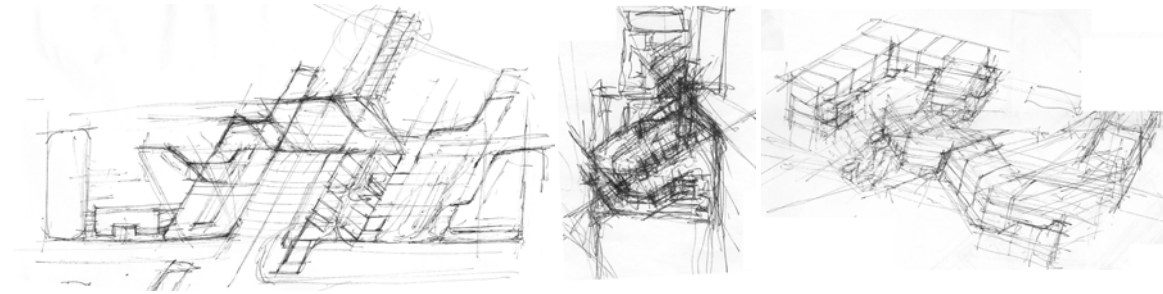


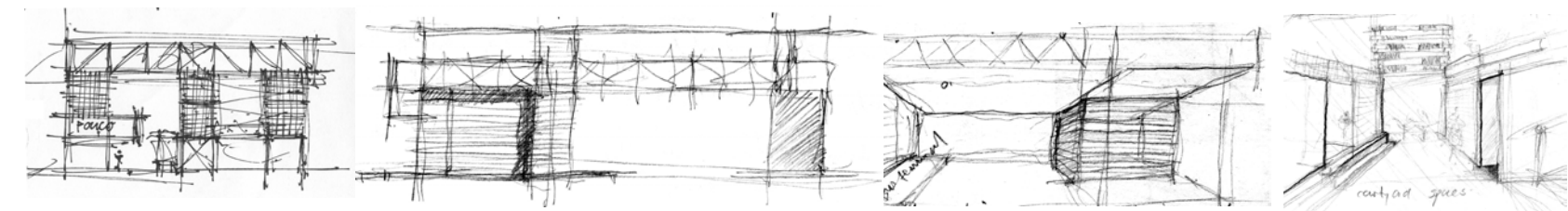
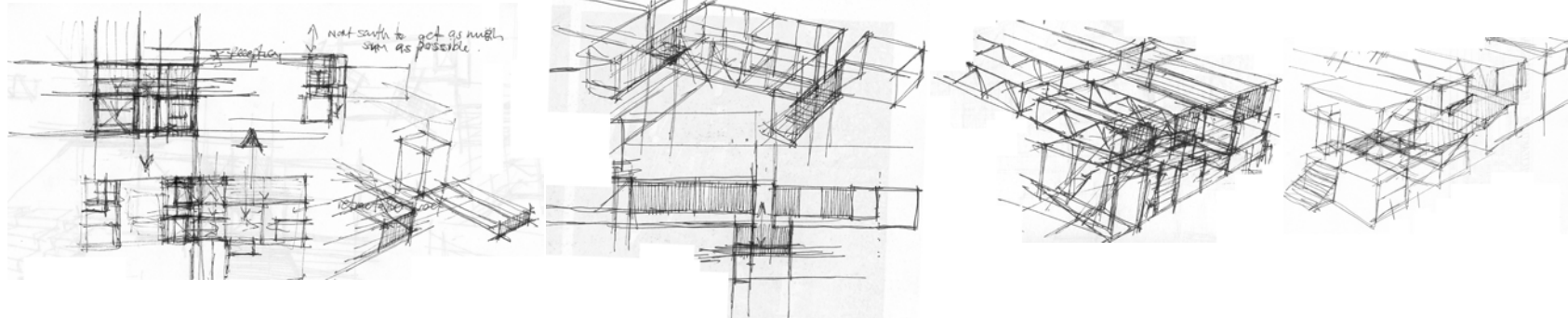
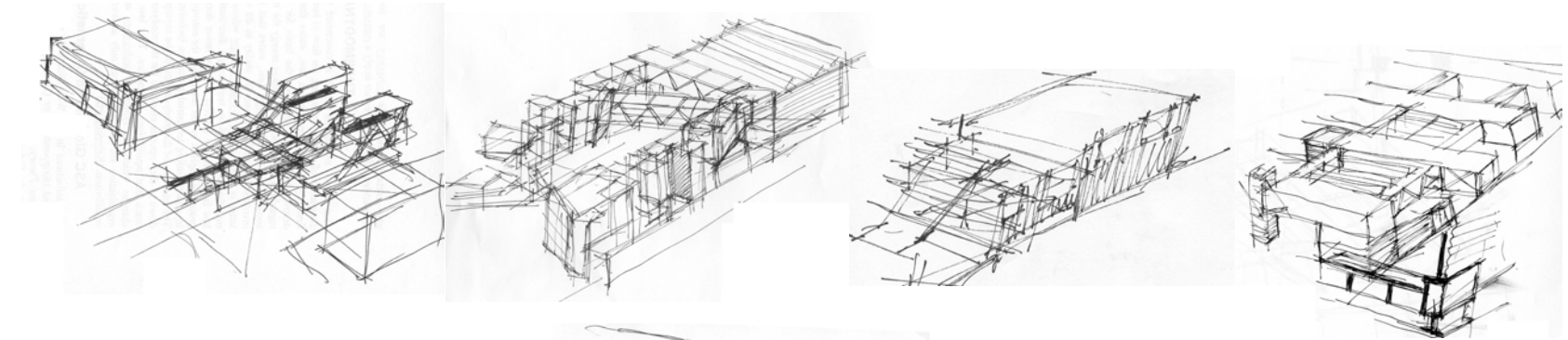
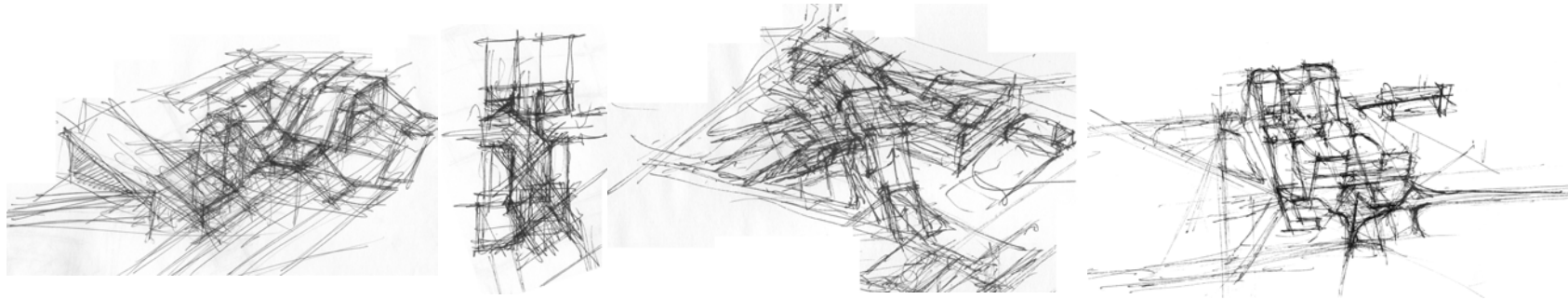
06

29

***Design
Development***



6.1



Design Development

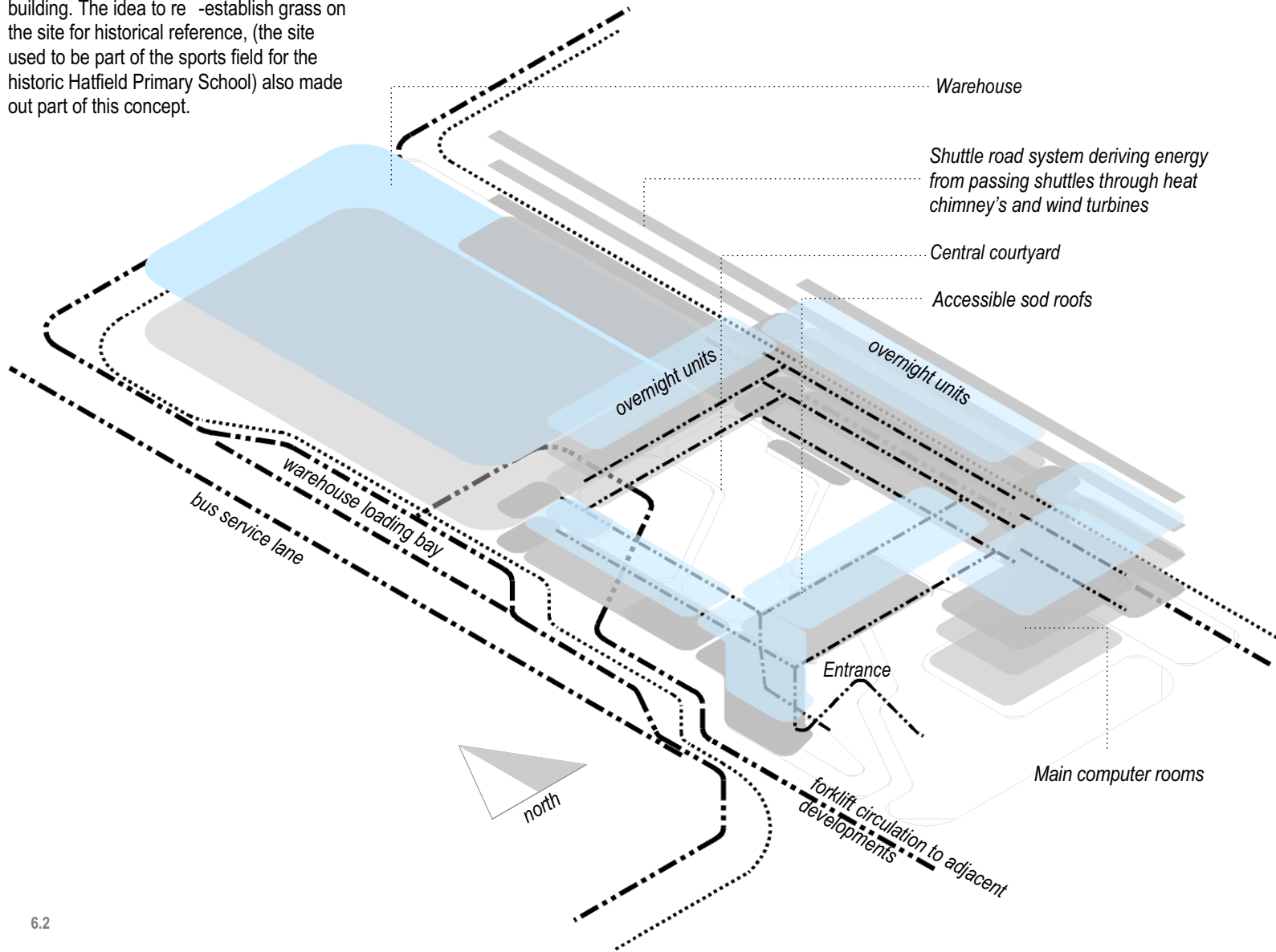
6.1 **FIRST CONCEPT**

The initial design concepts started with proposals to order the functions of the development around a central courtyard. In terms of sustainable building, the Gautrain shuttle road was tunneled underneath the eastern block to harvest energy used by the shuttles, to assist the HVAC systems in the building. The idea to re-establish grass on the site for historical reference, (the site used to be part of the sports field for the historic Hatfield Primary School) also made out part of this concept.

This concept was discarded, as it did not exploit the site's potential optimally. Some aspects, such as accessible roofs, courtyards, and the linking of the warehouse circulation pattern with the rest of the development were however retained as concepts.

6.1 Conceptual sketch progression from first concept to final proposal.
6.2 Diagrammatic south-western aerial view of first concept.

31

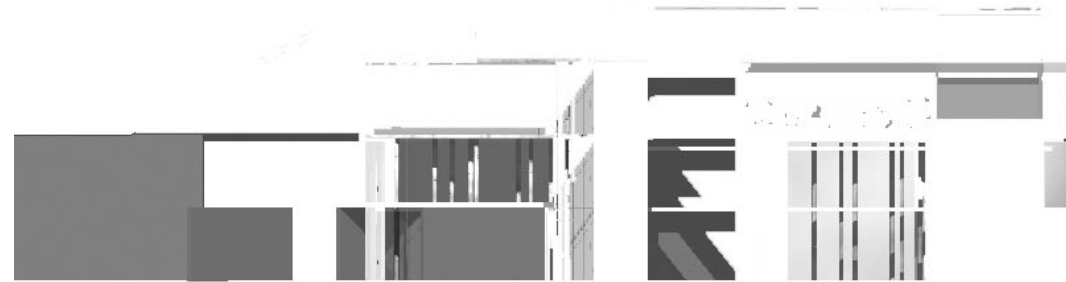


6.2

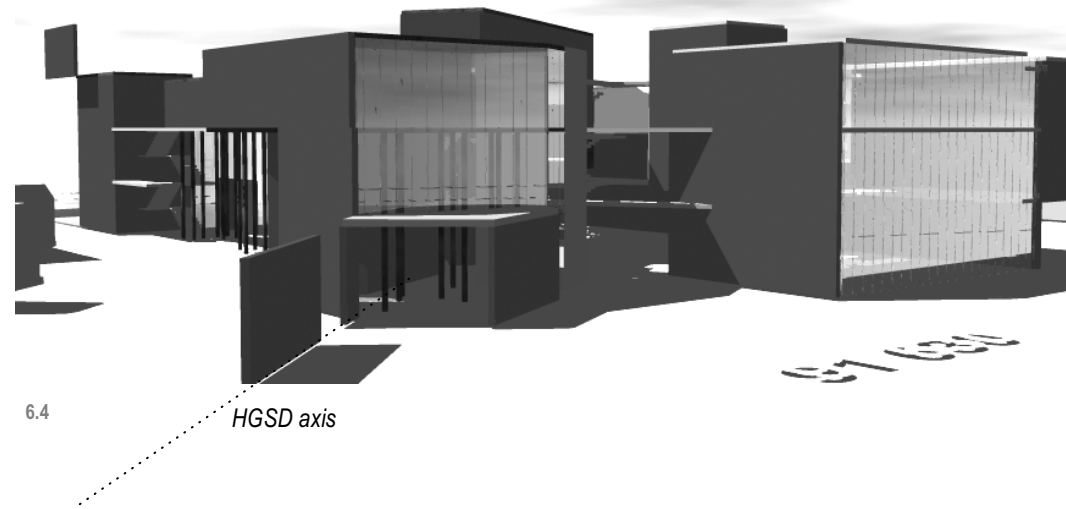
6.2 **SECOND CONCEPT**

In the following concept the initial idea of using the shuttle road still remained. Overhead structures to create space/shadow lines became an integral part of this concept, although not to such an extent as in the final design proposal where the structure traverses the bus terminal road. Exposed walkways to ensure inside/outside relations, as well as passive security, responded to the urban design concept. On plan the design responded to the new grid as formed by the HGSD, by way of an axis penetrating the city grid. This axis was discarded in later concepts due to its complexity, which could not be justified, as this site still remains part of the traditional city grid.

This concept did not make use of multifunctional spaces, and therefore struggled to display as an elegant entity.



6.3

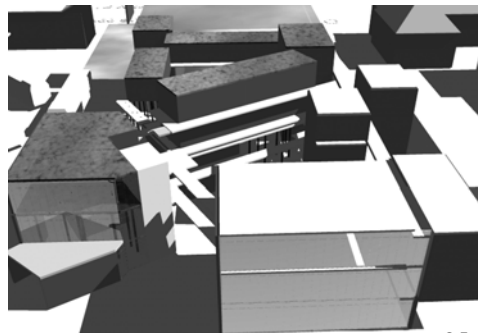


6.4

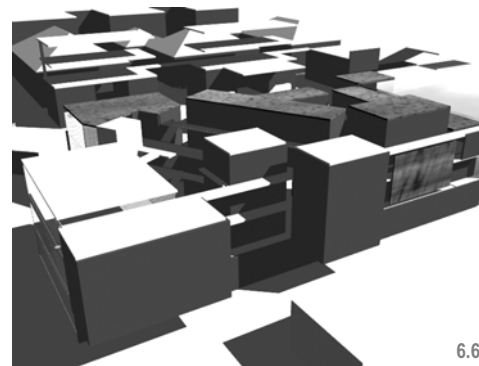
HGSD axis

Second concept

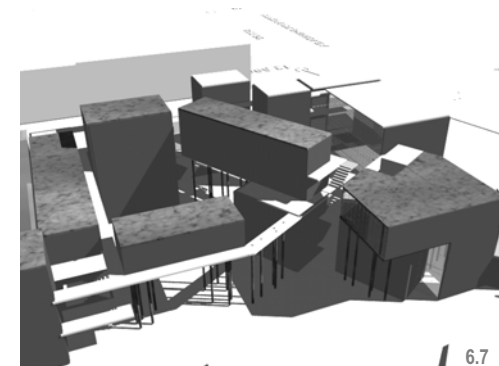
- 6.3 South elevation.
- 6.4 South-western view of entrance.
- 6.5 Southern aerial view.
- 6.6 Eastern aerial view.
- 6.7 Western aerial view.



6.5



6.6



6.7

6.3 **MID-YEAR REVIEW**

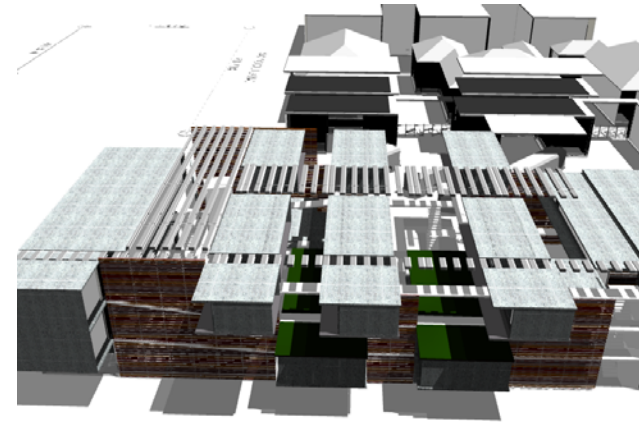
The concept on which the final design was based joined the city grid and started to discard the HGSD axis so that it could complement the station, rather than compete with it. The idea of a brick lintel screens system, as well as overhead structure came through, and the office roofs were made accessible by means of sod roofs. The ordering of the façades with regard to repetition and hierarchy was initiated by this concept. This design formed the basis for the mid-year review. To fulfill the urban design requirements, and to integrate the development with the western part of the site, it was decided to extend the overnight accommodation units over the bus terminal road.

Although technical aspects were already investigated, much had to be altered for the different functions of the building to be independent of each other.

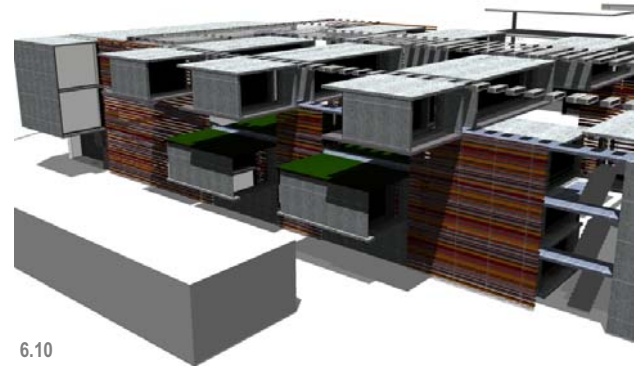
33

Mid-year Review

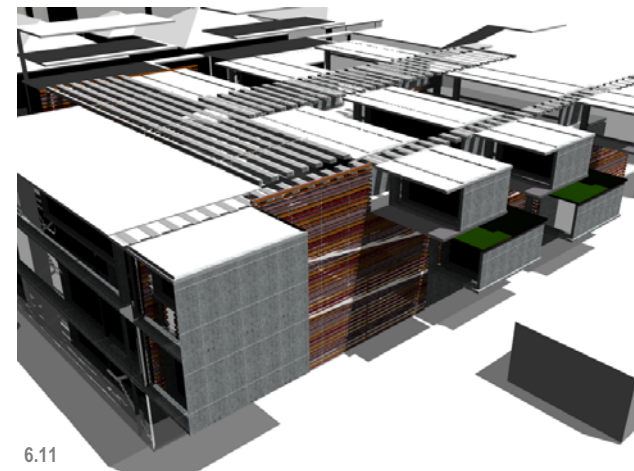
- 6.8 South-western aerial view of entrance.
- 6.9 Eastern aerial view. Note the ordering of elements on façade.
- 6.10 North-eastern aerial view.
- 6.11 South-eastern aerial view.
- 6.12 Plans, section and elevations of mid-year proposal.



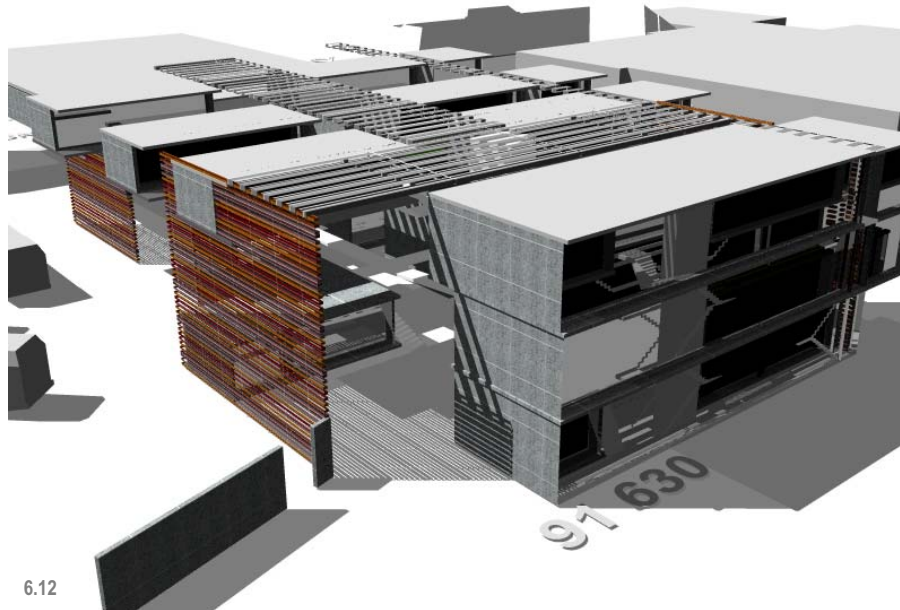
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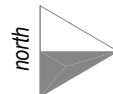
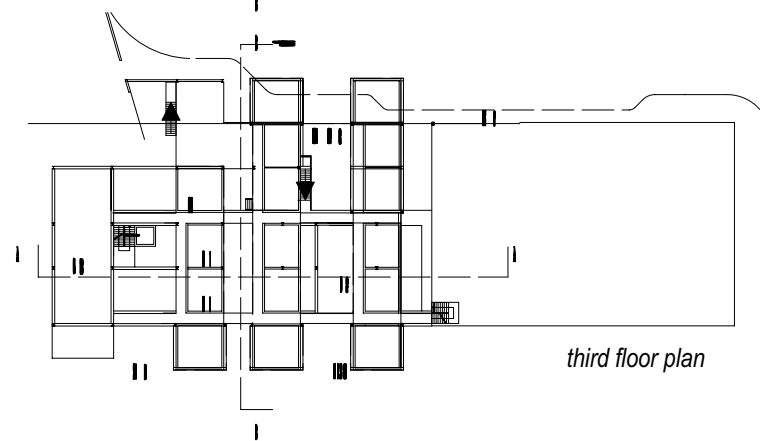
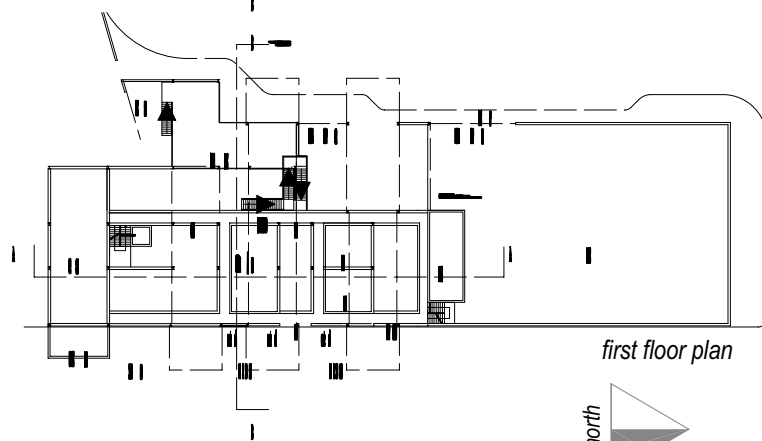
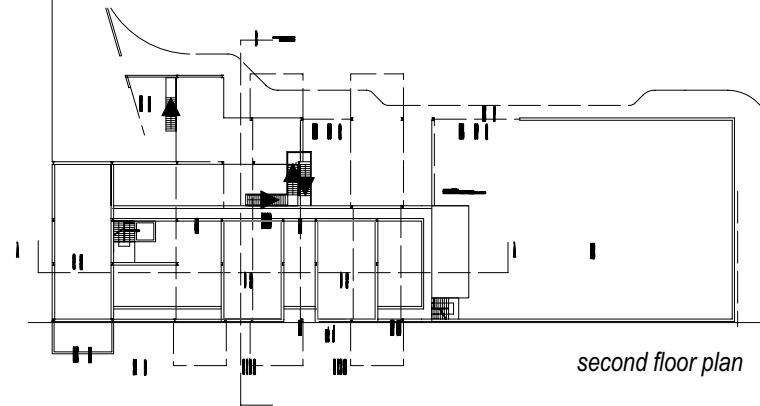
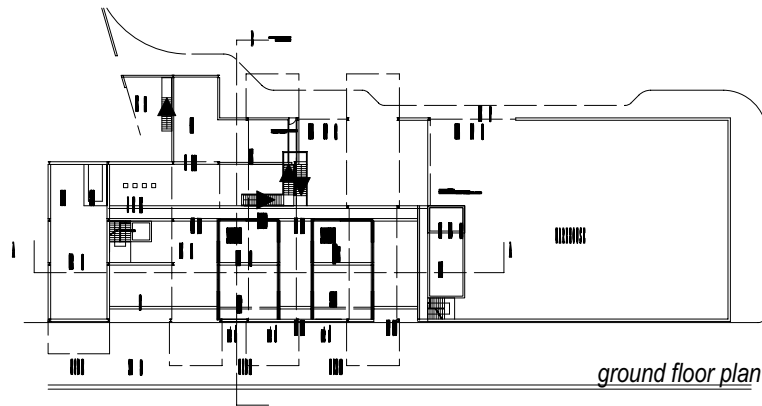
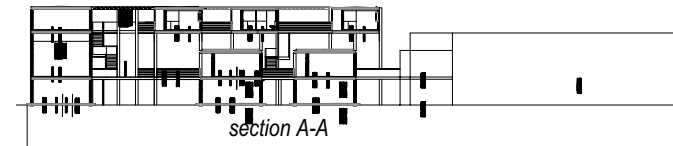
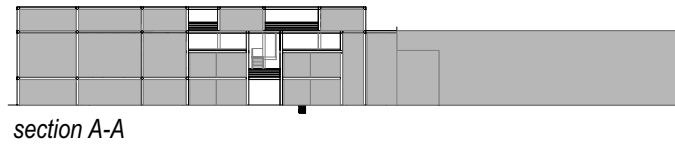
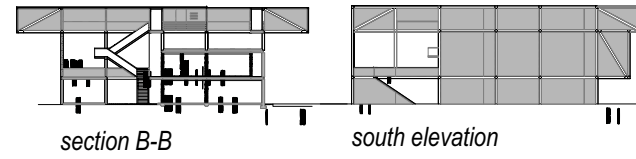
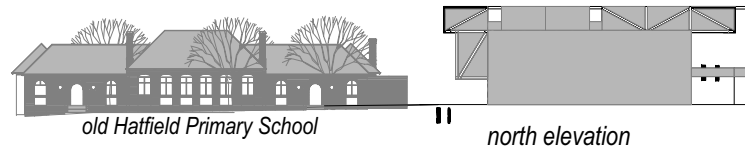
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6.11



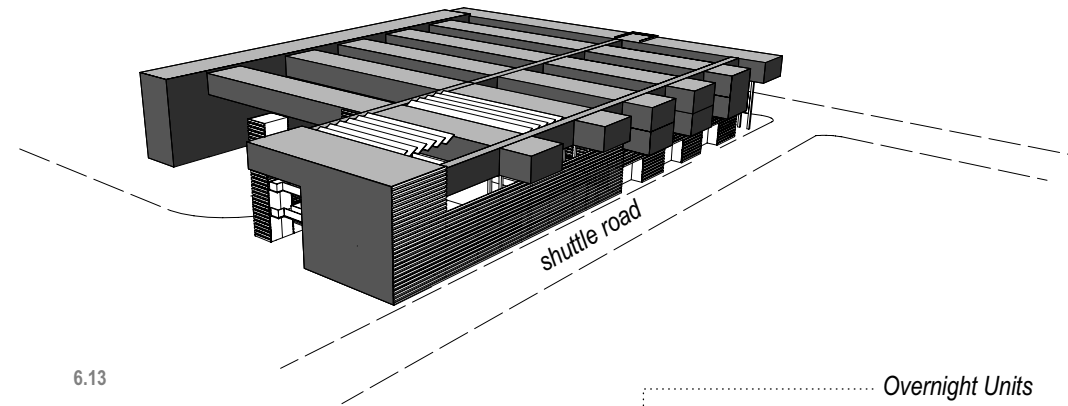
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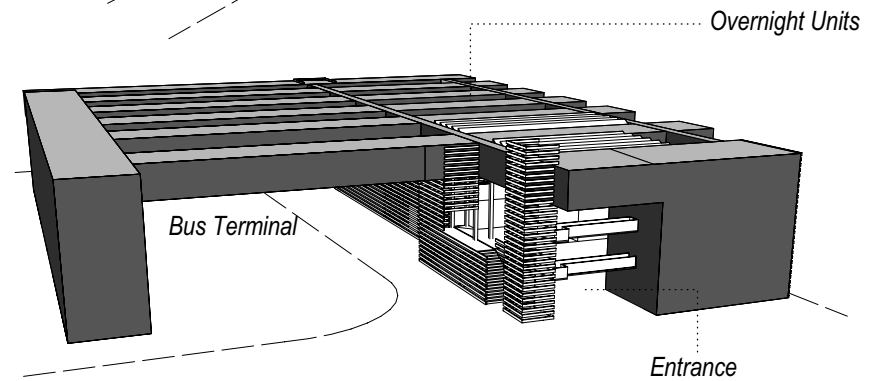
6.4 **TECHNICAL REPORT REVIEW**

The mid -year proposal was refined and reworked until a level was reached in which it fulfilled the technical requirements as determined by the baseline document. Main changes were the extension of the overnight accommodation units, not only over the bus terminal road, but also over the warehouse function. The accessible sod roofs were discarded to make way for roof ponds with a pedestrian ramp linking levels. This allowed the exterior social space to infiltrate the private space in an implied, but not direct way. The selection of materials formed an integral part of this design process. This would fit in with the programme, which required the construction to be labour intensive, making use of quality workmanship. Custom detailing of the different elements was resolved to ensure a respectful and permanent appearance and ambience to the building. After the technical report review, the decision was taken to make the overnight accommodation units' roofs accessible to provide a private external space for socializing and drying clothes, etc.

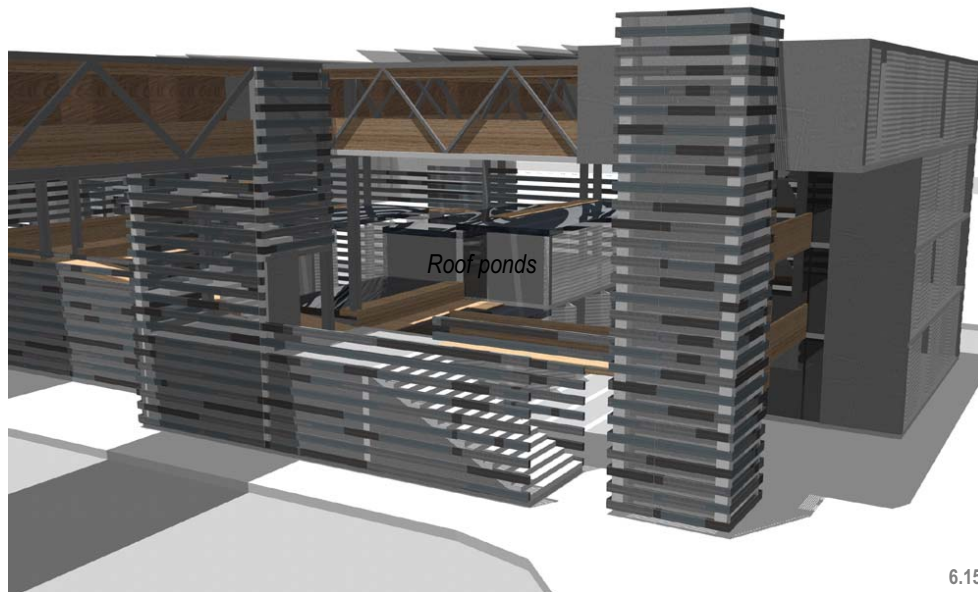
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6.13



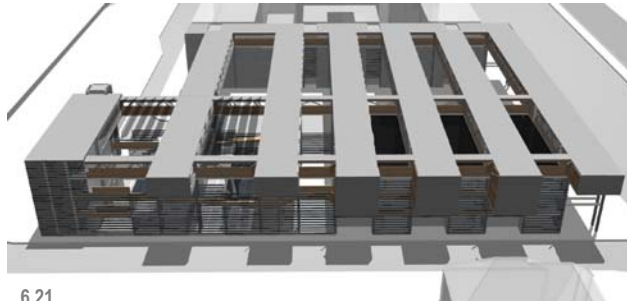
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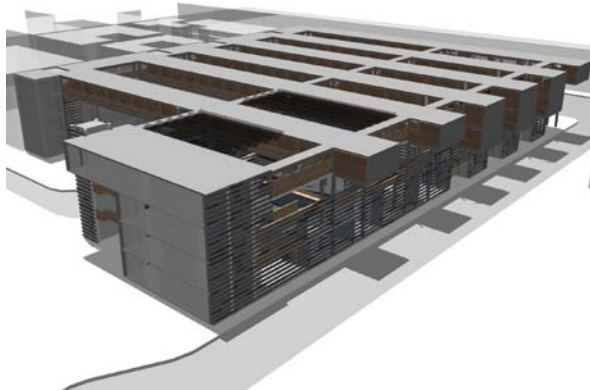
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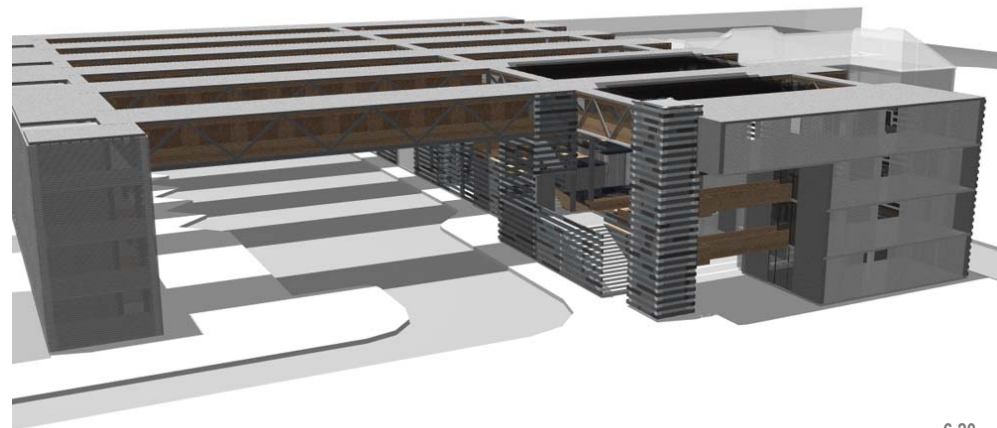
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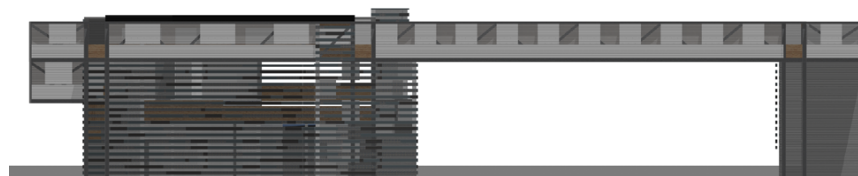
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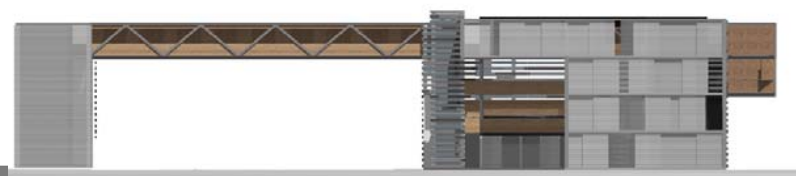
6.19



6.20



6.17



6.18

Technical Report Review

- 6.13 Block model: southeastern aerial view.
- 6.14 Block model: southwestern view of entrance to *Job Centre* and Bus Terminal.
- 6.15 View of entrance from School street: note the roof ponds.
- 6.16 North-eastern aerial view.
- 6.17 North elevation.
- 6.18 South elevation.
- 6.19 South-eastern aerial view.
- 6.20 South-western aerial view.
- 6.21 Eastern aerial view.

6.5 **FINAL DESIGN PROPOSAL**

The final design proposal comprises a complete and integrated response to the requirements of the brief, as well as those pertaining to sustainable building (Chapter 07). The technical issues have been resolved, and the building can function as an entity on its own, or as separate functions (to provide for future adaptability) due to the exterior placing of the circulation infrastructure.

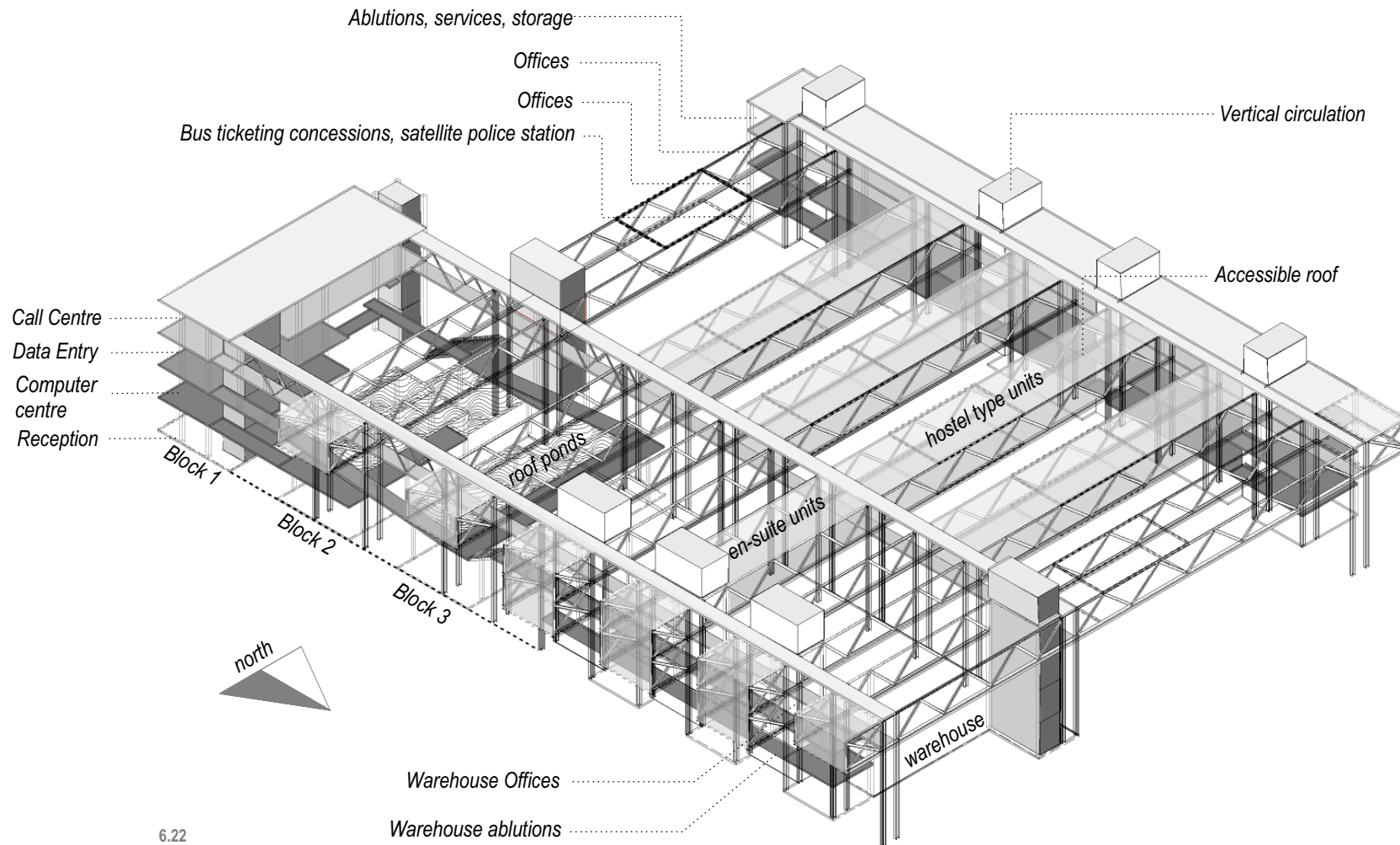
The main changes to the technical report proposal are the accessibility of the overnight units' roofs, with the accompanied shading net louvre system, and the exposure of the structure on the northern façade of these units.

Final Design Proposal

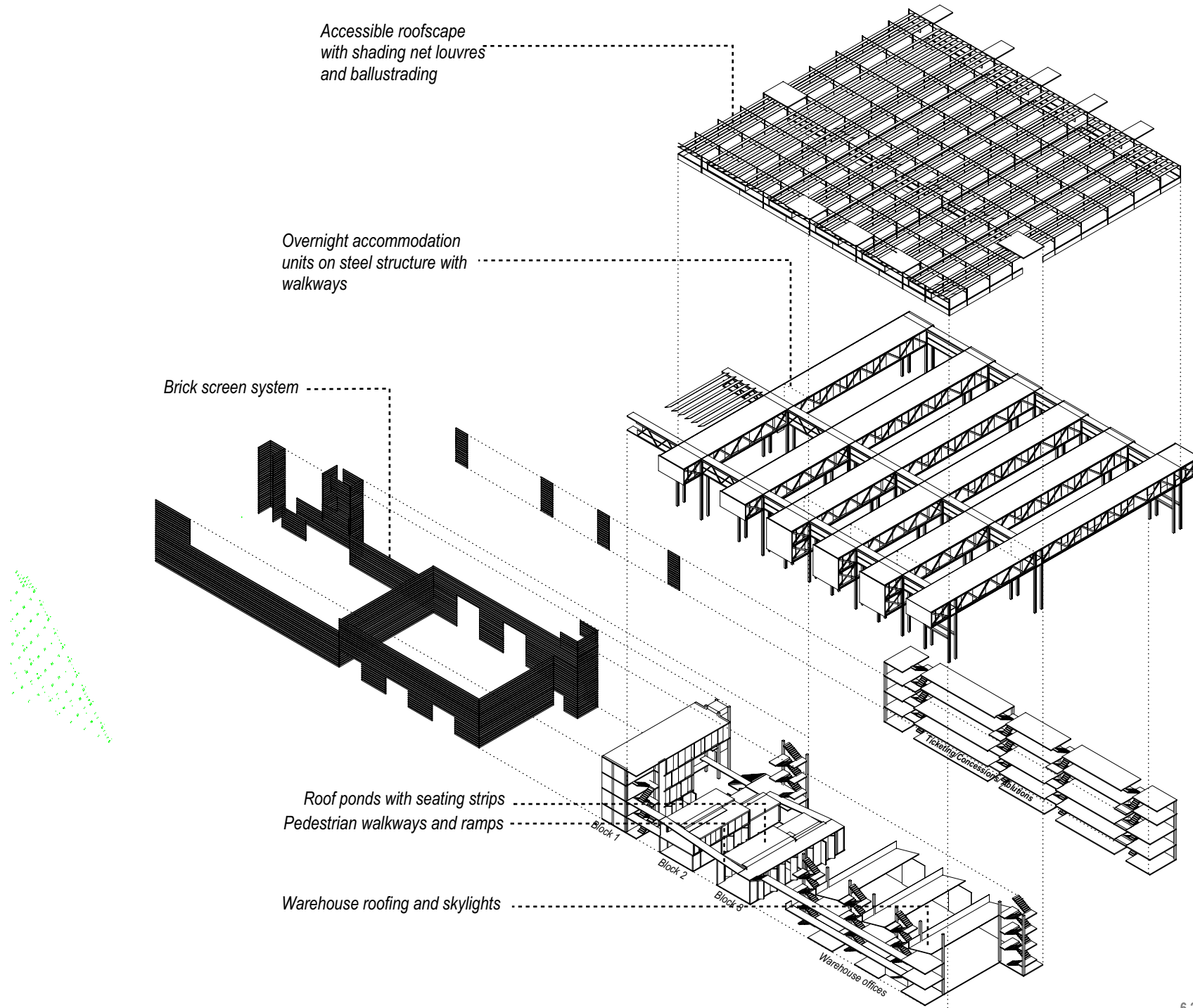
6.22 Diagrammatic layout of main structure and functions.

6.23 Northeastern isometric diagrammatic composition of structure and building elements.

37



6.22



Accessible roofscape
with shading net louvres
and ballustrading

Overnight accommodation
units on steel structure with
walkways

Brick screen system

Roof ponds with seating strips
Pedestrian walkways and ramps

Warehouse roofing and skylights

Block 1

Block 2

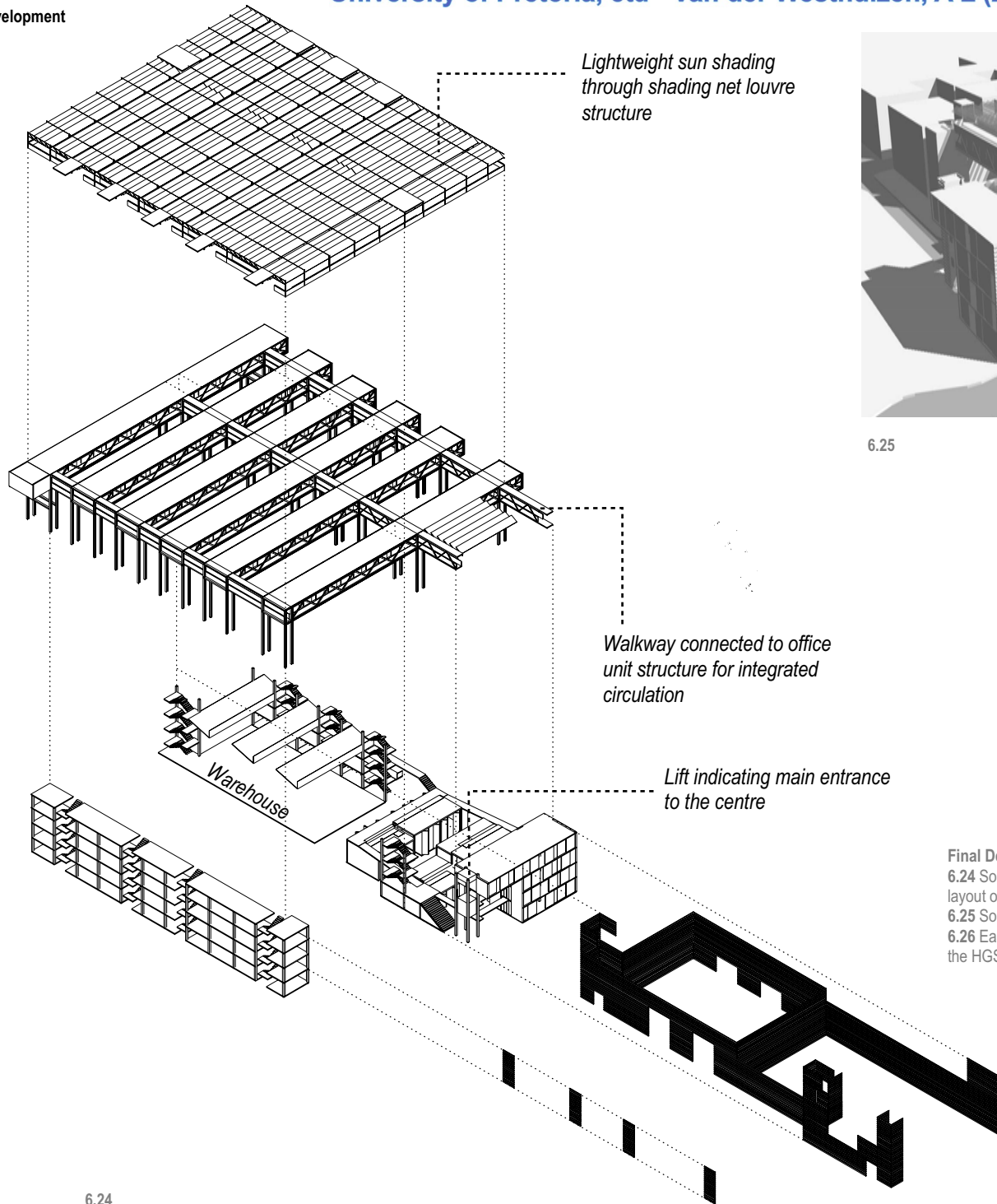
Block 3

Warehouse offices

Ticketing Concessions
and Louvres

Design Development

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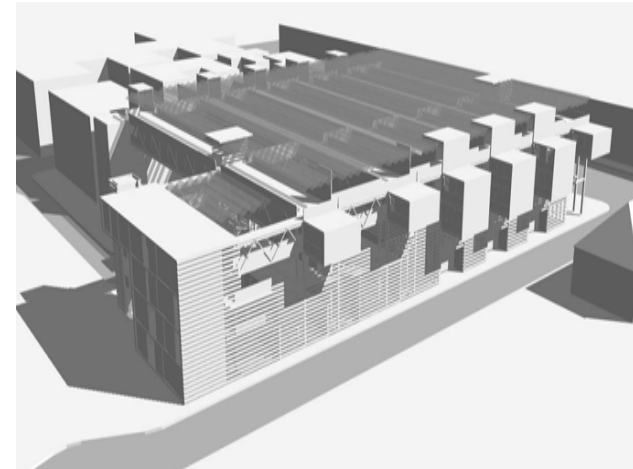


Lightweight sun shading through shading net louvre structure

Walkway connected to office unit structure for integrated circulation

Lift indicating main entrance to the centre

Warehouse



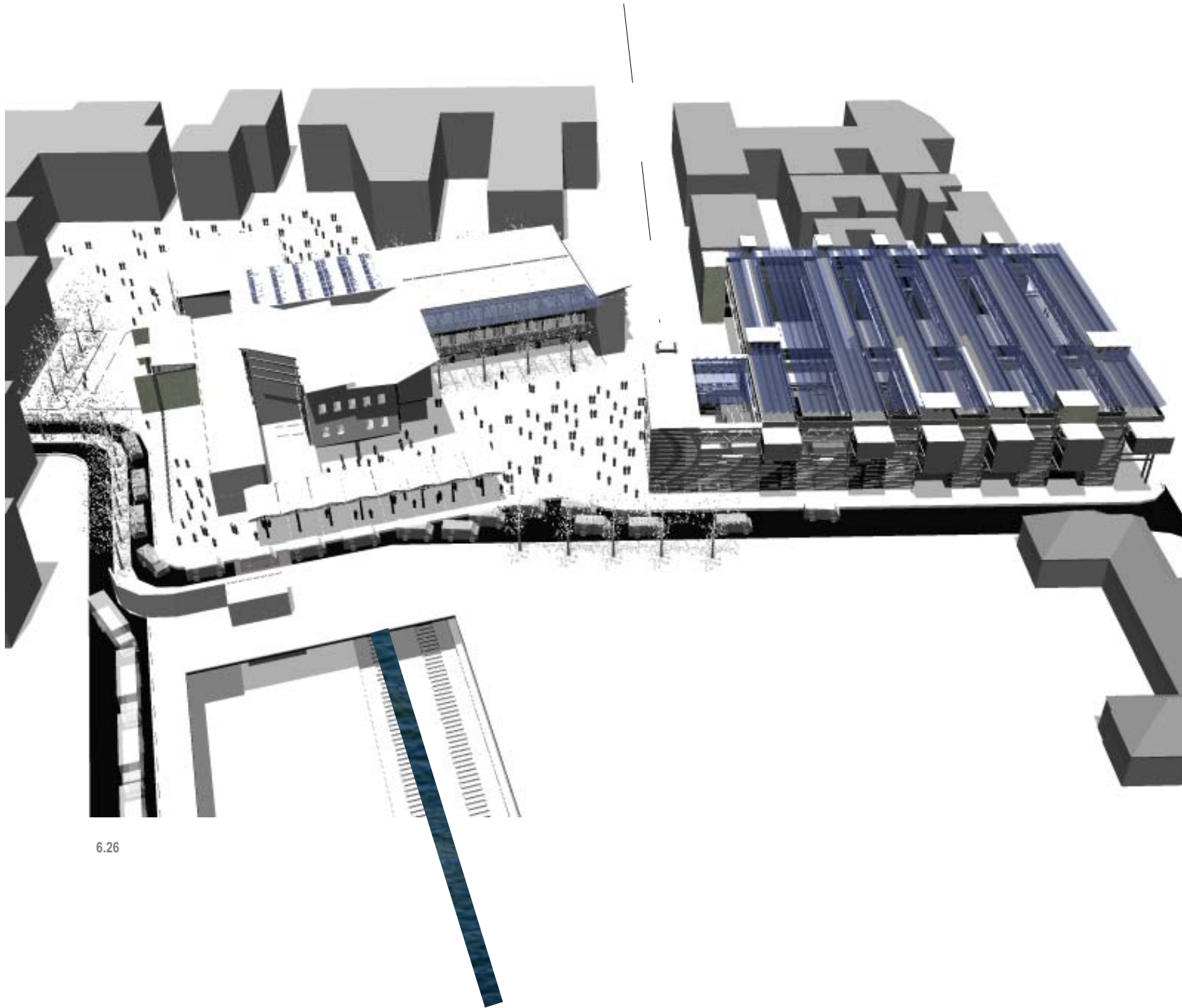
6.25

Final Design Proposal

6.24 Southwestern isometric diagrammatic composition layout of main structure and functions.

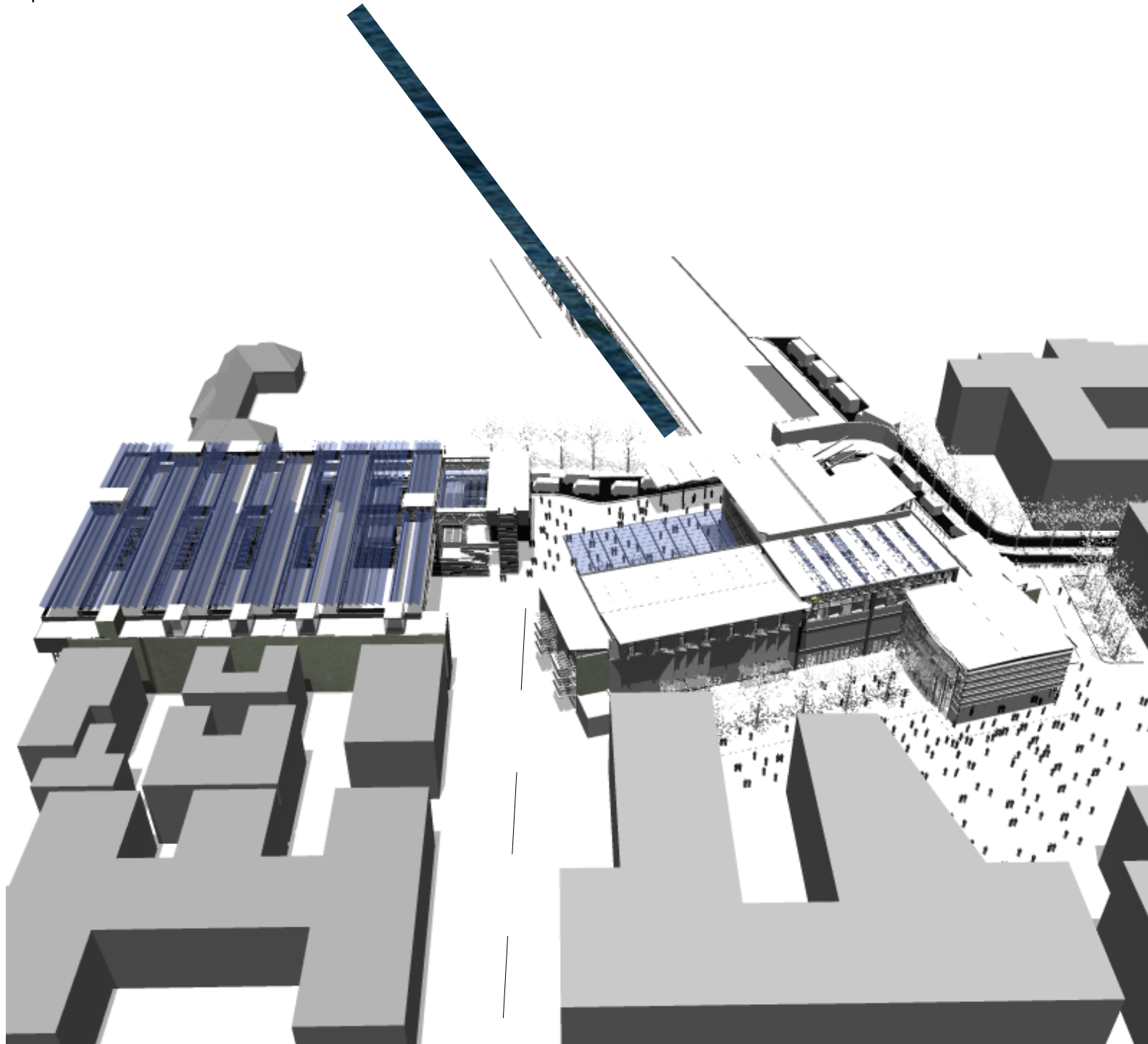
6.25 South-eastern aerial view of final design.

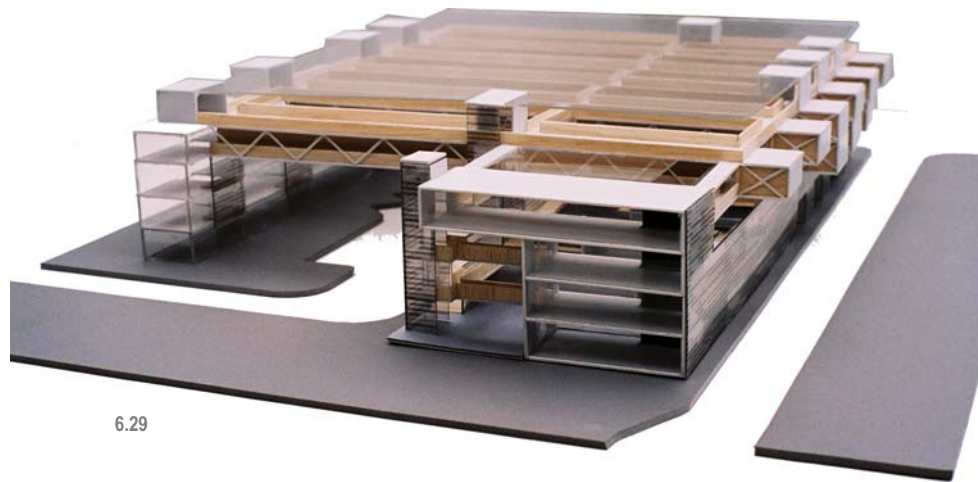
6.26 Eastern aerial view of final design in context with the HGSD.



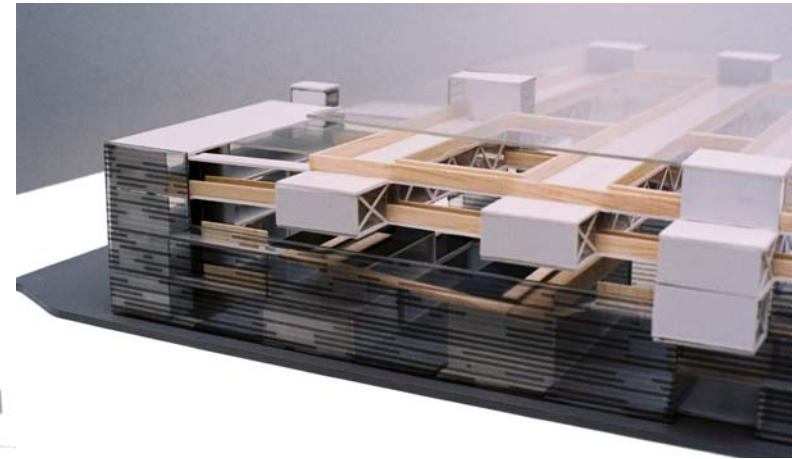
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6.26

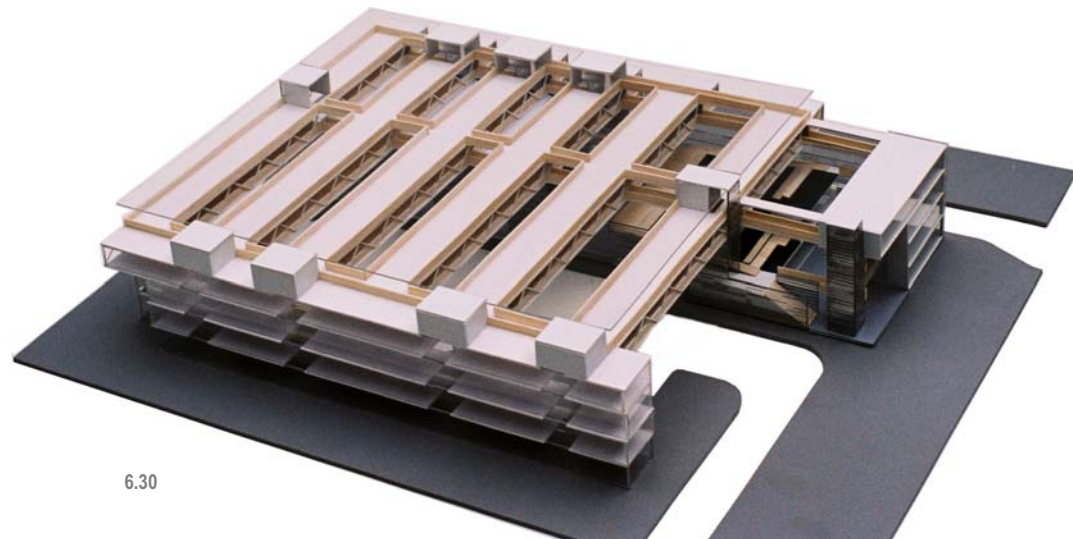




6.29



6.28



6.30

- 6.27 Eastern aerial view of final design in context with the HGSD.
- 6.28 Eastern view of office part of complex on model.
- 6.29 Southeastern aerial view of model.
- 6.30 Southwestern aerial view of model.