

**FACILITIES MANAGEMENT DEPARTMENT**

**DESIGN AND TECHNICAL DOCUMENTATION FOR CONSTRUCTION**

**INTRODUCTION**

The purpose of this guideline “design and technical documentation for construction” aims at encouraging individual creativity within a unity of materials and finishes ensuring that the overall UNIVEN infrastructure development, harmonizes and creates a balanced, functional and operational infrastructure development conducive to post-construction service and maintenance. This will also assist in protecting the university’s investment in the infrastructure.

It is the aim of Facilities Management Department, assisted by Built Environment Consultants that the functionality and operational of the building reflected would represent that of the collective creativity as there is no prescribed Architectural or Engineering style. For the rest, it is up to the individual professional to contribute to the successful execution of the university’s aim, but the supervising project manager or personnel will also assist in attaining this goal.

The controlling Local Authority for the infrastructure development is the Thulamela Local Municipality who will be responsible for the approval of all plans and buildings.

The design of the building or structure must show sensitivity to the existing natural features, flora and topography. Permission must be obtained from the university before existing trees are removed and all existing trees are to be indicated clearly on the site plan. Surrounding, services, structures and buildings must be taken into account in the design process.

In view of the above, kindly note that these guidelines are not a replacement of any statutory requirements, necessary submissions or approvals; they are additional to the National Building Regulations (NBR), South African Bureau of Standards (SABS), and Occupation Health and Safety Act (OHS Act) or any other applicable bylaws and legislations.

1. Both external and internal staircases should include an up-stand on the edge to avoid water drips and spillages.
2. Air-conditioning industrial outdoor unit plants and equipment should not be exposed such that they can gather dust.
3. In order to reduce costs, steel roof trussed columns are applicable only when necessary.
4. All parking should be contracted with metal sheet shade structures.
5. Adhere to the application of cost effective paving bricks as opposed to expensive paving bricks of various colours.
6. The construction of new buildings should include landscaping, pedestrian access and dedicated end-users parking.
7. All lecture halls and theatres should be provided with entrance foyers to reduce noise.
8. Director, School Deans and HOD’s should be consulted to indicate electrical and data plug points quantity and requirements per each laboratory, lecture hall, etc.
9. Floor-mounted electrical and data plug points should be avoided.
10. Buildings should be provided with a stand-by generator (power supply), that will cater for total business continuity in the building.
11. Buildings should be provided with a dedicated main water supply valve.
12. Buildings should be provided with a conventional electricity odometer reading.
13. Buildings should be provided with sufficient garden taps.
14. All Roads, “existing and new”, should be provided with speed humps, pedestrian crossings and road signage.
15. Student Residences and offices should be designed and constructed in aligned with the DHET minimum standards and guidelines
16. To avoid damages, toilets and shower doors must be at least 100mm above finished floor level.
17. Ablutions and kitchens must be provided with floor drains.
18. Buildings should be provided with communal areas and facilities (kitchen and sitting areas etc)
19. Cleaning staff and cleaning equipment store-rooms must be provided per building and per floor when and as deemed necessary.
20. Doors must be provided with door stoppers.
21. Ablutions doors at Student Residence must be provided with kick-in metal plate.
22. Civil engineering consultants must analyse new developments in terms of an impact on the university’s water system. The effects of an average day flow, peak hour flow and max day plus fire flow are to be evaluated ensuring sufficient water supply is available to meet the needs of the development and that the proposed water system layout and sizing are adequate.
23. A maintenance plan must be submitted, upon practical completion, with regard but not limited to Mechanical and Electrical Engineering Infrastructure such as Air Conditioning units, Substations, etc.
24. Plumbing system design will require the approval of all appliances and fixtures by the Facilities Management Department.
25. Landscaping and Irrigation design layout should be shown on a separate sheet; and the street signage layout should be incorporated on landscape plans (to ensure that signs/landscape conflicts are resolved).
26. The placement of trees and shrubs will require physical barrier between public and private landscape improvements and irrigation systems.
27. Each ablution in any building should be provided with dedicated stop cock and water valve, such that In case of any water challenges in the ablution, the closing of water pipes does not affect the whole building, but only the concerned ablution or kitchen etc.

Infrastructure Master Plan should be handled in dedicated 4 sets:

1. Building and roads (comprehensive);
2. Water supply reticulation (reservoirs, supply pipes, valves etc);
3. Grey water reticulation (gully’s, manholes, main lines etc)
4. Electrical and data reticulation (DBs, substations, generators, cables etc).

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