

Case Study Summary: Residential Apartment Development in Ruiru, Kiambu County

Project Overview

This project involved the **development of a residential apartment building** in Ruiru, Kiambu County. The project was designed to provide **modern, affordable housing units** targeting middle-income residents working in Nairobi and surrounding areas. The development focused on efficient land use, structural stability, and comfortable living spaces.

Project Location

- **Location:** Ruiru, Kiambu County, Kenya
 - **Setting:** A rapidly growing urban center experiencing increased demand for rental housing due to its proximity to Nairobi.
 - **Accessibility:** Located near **Thika Superhighway**, offering convenient access to Nairobi CBD, Thika town, and nearby industrial zones.
 - **Infrastructure:** Availability of electricity, water supply, sewer services, and public transport.
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Project Scope

The project involved the construction of a **multi-storey residential apartment building** designed to accommodate several housing units within a compact urban setting.

Key components of the development included:

- Multiple **self-contained residential units**
- **Shared staircase and circulation areas**
- Parking area and external access pathways
- Water storage and drainage systems

The construction works included:

- Site preparation and building setting out
- Excavation and reinforced concrete foundation works
- Structural framework including columns, beams, and slabs
- Masonry wall construction using machine-cut stones
- Roofing and waterproofing works
- Internal and external plastering
- Floor finishing works

- Plumbing and sanitary installations
 - Electrical wiring and installations
 - Internal and external painting works
 - Installation of doors, windows, and fixtures
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Design Considerations

The apartment development incorporated the following design considerations:

- **Efficient space planning** to maximize the number of residential units
 - **Structural strength and safety** through reinforced concrete structural systems
 - **Adequate lighting and ventilation** for each housing unit
 - **Durable construction materials** to reduce long-term maintenance costs
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Construction Approach

The project was implemented through structured construction phases:

1. Site preparation and foundation construction
 2. Reinforced concrete structural framework construction
 3. Masonry walling and roofing works
 4. Internal and external finishing works
 5. Installation of plumbing and electrical services
 6. Final painting and completion works
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Project Outcome

The development successfully delivered a **modern residential apartment building** that provides affordable and comfortable housing units. The project contributes to meeting the growing housing demand in Ruiru and supports urban residential growth in the region.

Conclusion

The residential apartment development in **Ruiru, Kiambu County** demonstrates efficient urban housing development by combining **functional design, structural durability, and cost-effective construction methods** to deliver quality residential units suitable for the growing population in the area.

