

Selection of the Study Areas; The facilities mentioned below were chosen as case studies based on the research topic and it's ability of meeting the space functionality requirements of the spaces in a shopping mall. They are; The Jabi Lake Mall, Abuja, Nigeria.; The Shoprite (Polo Park Mall), Enugu, Nigeria.; The Port Harcourt Mall, Rivers State, Nigeria.; The Silver Bird Entertainment Centre, Abuja, Nigeria; Smiralind Shopping Mall Ice; The Dubai Mall, Dubai, United Arab Emirates.

Criteria for Assessment of Case Studies; The basis for the assessment of the selected case studies includes the terms considered below. **Plan Layout:** The design layout should be done to best suit the project. **Accessibility:** The users of the mall should be able to access the mall with ease. **Location:** The site location of the mall should be feasible. **Aesthetics:** The physical appearances of building elements and spaces should be pleasing to the eyes. **Sustainability:** Environmental performance of the building elements and strategies should be energy efficient. **Human Factors:** The users of the mall should be psychologically and physically comfortable at all time in the mall. **Functional Requirements:** The durability, spatial and functional needs, and also proper maintenance should be put into special consideration.

CASE STUDY DEDUCTION

Nature of site: the site should be set free from significant streams, interceding streets, easements etc.

Zoning: existing zoning most allow shopping center development within that zone.

Location: the site should be located in the most suitable area as proven by the economic survey.

Land area: the site must cover enough land space to enhance proper construction of facilities and also allow for future expansion.

Architectural character: The use of glazing highlighted the need for transparency which is necessary to the architecture of a shopping mall.

Traffic resolution: The separation of the various traffic routes such as vehicular routes, pedestrian walkways and service routes were used to achieve good traffic resolution in the designs.

Structure and materials; Main materials used in the studied facilities includes steel, light metal cladding, PVC tensile fabric, reinforced concrete and glass. The facilities were mainly of reinforced concrete framed construction. The interior spaces were predominantly open plan hall spaces that are partitioned with light weight partition walls or sand crete walls. Steel

trusses were mostly used as roof members. Coated and well treated wooded trusses were also used.

DESIGN CONSIDERATION ABNORMAL TO PROPOSED SHOPPING MALLS

Circulation Spaces; This is the most important consideration among the design considerations. It is essential to provide both private and public spaces for shopping malls. Spaces for circulation and movement of customers in and within the shopping mall is the priority function of the shopping mall design. These spaces are mainly accessible during the operating hours by the general public and intending users. The private spaces such as the services zones through which the facility is serviced is very important and needs to be well located for easy access by delivery vehicles and also should be located out of the sight of customers. Also the location of these service zones should not interfere with customers and vehicular movement within the site.

Fire Precautions; Fire precautions provisions have to be taken into serious consideration to curb or reduce fire outbreaks such as, providing emergency exits and fire services installations such as water sprinklers and smoke detectors.

Firefighting Access; An access for fire fighting vehicles should be considered during the design to allow quick access to the scheduled points within the facility. Hose reels will be extended from the fire-fighting vehicles to cover all parts of the facility from the scheduled points of access.

Contribution to Knowledge

1. This study proves the possibility of creating unique shopping malls which can satisfy the need of the people in Abakaliki and the neighboring regions.
2. This study proves the importance of good circulation pattern and movement in shopping malls.
3. In a shopping mall facility, the mall streets are made wide enough to enhance easy and free flow of internal traffic in shopping mall.
4. An effective shopping mall design must have the service area separated from the customers area and a service route through which the shops can be serviced at any time without having customers and service conflict in the shopping mall.
5. In a shopping mall design, the anchor shops are placed at strategic locations to enable shoppers observe the satellite shops and feel the esthetic atmosphere while locating the anchor shops.

CONCLUSION

Shopping malls are enclosed shopping streets established for the purpose of public shopping and execution of other leisure activities. Shopping malls are not just designed for shopping activities alone, but are versatile and contains other facilities such as entertainment, cultural and recreational facilities that are well arranged together in an enclosure. The internal spaces of shopping malls are usually designed in such a way that it imitates the metropolitan streets and lifestyle which creates the impression of shops scattered along the streets. The layout and circulation patterns used as well as the links between the different spaces in a shopping mall forms a composite system which users are required to move through in and within the facility. Most times the use of complex circulation plan and improper circulation in a shopping mall creates an uneasy shopping atmosphere, poor wayfinding and difficulty in movement in and within the shopping mall either by poor orientation of spaces or improper positioning of vertical circulation systems in the facility. Hence it is essential to properly link all the spaces and services together in and within the facility. The priority of this study is to educate designers on the merits of adopting a good circulation model that is affiliated with their proposed mall design pattern and to integrate the researched mall circulation patterns into their proposed designs to optimize efficiency in shopping malls in Abakaliki.

RECOMMENDATIONS

Circulation in design is one of the determinant factors to achieve success or failure in the design of large projects such as a shopping mall. Hence, I recommend that circulation and movement pattern should be put into serious consideration during the preliminary design stages of any proposed shopping mall design in Abakaliki and other regions in Ebonyi State. The government of Ebonyi State should consider the gains of investing in such project as it will propel the economic growth of the state as well as create chances of employment to the residents of the state.

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