

FIRE NOTES

1 Introduction
 WBA Consultants have been commissioned to provide a Fire Design Report for the conversion of the 2nd floor of the existing retail shopping centre in Gillespie Street Durban. The fire design for the conversion of the 2nd floor report will be in accordance with the 'deemed to satisfy' requirements of Part T of SANS 10400:2011.

This Fire Design Report will address the following aspects of the fire regulations as contained in Part T:

- Fire escape provisions
- Smoke ventilation
- Fire Fighting equipment
- Fire Alarm and Detection system

This report forms part of the NBR application for the project.

2 Legislation and Fire Engineering Approach
 The following legislation will be considered with respect to this project:

The National Building Regulations SANS 10400:2011

It is considered that any issues arising from the local authorities are addressed under the requirements of the NBR for this project.

This report is not intended to directly address insurance requirements. Whilst many of the provisions set out in this report will provide enhanced property protection and business continuity, the insurance for the project should be consulted to determine any additional requirements which they may propose for the project.

3 2nd Floor Layout
 The entire 2nd floor will be a redesign of existing retail to small, individually leased shops. The area of the shops will range from 14m² to 230m². All partitions will be constructed of non combustible building components. There will be no ceilings installed.

4 Occupancy Classification A20
 The existing building is classified as A1 - place of assembly. The 2nd floor will be classified as A20 - place of assembly. The population density will be based on F2 occupancy - small shop.

5 Division Area - T4.4
 The entire building is protected by an ordinary hazard sprinkler system. The sprinkler system will be retained for the entire second floor.

6 Access for Fire Fighting & Rescue Purposes T4.54
 Access to the second floor of the building has not changed. There are four emergency routes which lead from ground level to the second floor.

7 Fire Escapes T4.16
 The floor area of the 2nd floor conversion is 5812m². The occupancy rate for F2 in terms of A21 is 1 person per 10m² of floor area. The population of the second floor is given by 5812/10 = 581 persons.

The number of escapes required for 581 persons is 581/100 = 5.81 x 100mm escapes. Therefore the total escape width required for 581 persons is 5.48 metres. There will be 2 x 2 metre escapes and 4 x 1.5 metre escapes. The total width of escapes provided is 10.4 metres. One 2m escape is discounted which leaves a total of 8.4 metres of escape width allowing escape for 581 persons. All components of the emergency routes will be fire rated for 120 minutes. The travel distance to the escape door to the emergency routes do not exceed 45 metres. All fire escape doors will be provided with approved locking devices. The fire escapes comply with T115.

8 Fire Alarm and Detection System T4.31
 The building has an existing fire alarm and detection system. A Li fire alarm and detection system will be installed on the 2nd floor. All components of the fire alarm and detection system will comply with SANS 10138. Manual call points will be provided at all exits from the 2nd floor.

9 Smoke Ventilation T4.40
 All existing smoke extraction fans on the 2nd floor will be recommissioned. The smoke extraction system ducting will be extended to provide extraction from the walls between the small fire shops. The smoke extraction system will be interfaced with the fire detection system which will provide the signal to start up in the event of a fire.

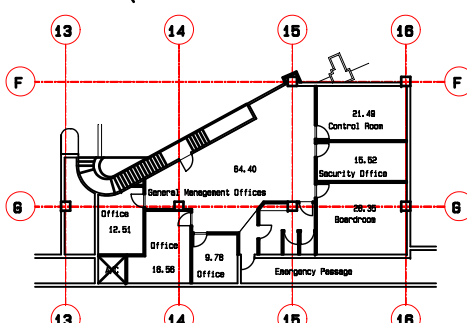
10 Sprinkler System T4.26
 The existing sprinkler system will be reinstated and heads will be requested so that the installation is in compliance with A218. All sprinkler valves will be serviced.

11 Fire Fighting Equipment
 First aid fire fighting equipment consisting of 8kg DCP fire extinguishers and fire hose reels will be installed. Existing fire hydrants will be serviced and made available for use. Two 8kg fire extinguishers will be positioned at each fire hose reel. All tenants of the shops will be advised to purchase a 4.5 kg fire extinguisher for their own use.

12 Fire Signage and Emergency Lights
 All escape routes will be signposted with photo luminescent signs. Emergency routes will be provided with emergency illumination in accordance with T4.30.

Fire equipment and fire escape signage will be installed in accordance with T4.29 & T4.32 of SANS 10400 and SANS 1195.

13 Conclusion
 All fire safety measures have been provided to ensure that users and rescue staff are provided with a minimum level of protection during a fire. All fire equipment must be serviced and maintained in accordance with manufacturer's specifications and 9hires. All staff members must be provided with basic fire extinguisher training so that a fire can be extinguished in the incipient stage. An evacuation plan must be drawn up and posted up at all escape routes.



EXISTING MEZZ 165m²

DATE	REVISION	BY

SLATE 1.5 PRICKER ROAD, ELANDIA, JOHANNESBURG
 PO BOX 538, NORTHLAND, 2116, SOUTH AFRICA
 TEL: +27 11 368 6822 FAX: +27 11 368 6820
 EMAIL: DESIGN@H-ARCHITECTS.CO.ZA

H-ARCHITECTS

THIS DRAWING IS NOT TO BE SCALED.
 ONLY DIMENSIONS SHOWN ARE TO BE FOLLOWED.
 CONTRACTORS ARE TO CHECK ALL DIMENSIONS BEFORE WORK COMMENCES AND REPORT ANY APPARENT DISCREPANCY TO THE ARCHITECTS. THIS DRAWING IS THE SOLE PROPERTY OF H-ARCHITECTS AND MAY NOT BE COPIED OR REPRODUCED IN ANY MANNER WHATSOEVER WITHOUT THE OWNERS WRITTEN CONSENT. COPYRIGHT

PROJECT
REDESIGN OF EXISTING SECOND FLOOR RETAIL CHINA MALL
 55 GILLESPIE STREET DURBAN
 ERF 10363 OF DURBAN
 CHINA MALL
 EXISTING WHEEL SHOPPING CENTRE

DRAWING
2ND FLOOR PLAN

SCALE	DRAWN BY
1/500	HFC
	DATE
	08/03/2011
	REVISION

DRAWING NUMBER
4404-100

0