

INITIAL FIRE SAFETY INSPECTION REPORT

Factory Name: Sterling Designs Limited (Extension)

RSC ID: 24610

Factory Address: Ward No: 7, Biswaspara, Chandra, Kaliakoir, Gazipur Area, Gazipur.

Other Factories: Sterling Designs Limited (ID-11308; Same premises)



Inspected By: Md Anisuzzaman & Mahbub Alam Sami

Date: 10th Nov 2024

Fire Safety Inspection Report

Sterling Designs Limited (Extension)

Introduction:

"**Sterling Designs Limited (Extension)**" complex was surveyed for fire safety on **10 Nov 2024** by The RSC Inspection Team. The purpose of the survey was to identify significant fire safety issues and to provide recommendations for remediation based on applicable standards specified by the RSC. The scope of this initial fire safety inspection was limited to the review and identification of major fire safety issues. The inspection did not include identification of minor deficiencies, which will be further addressed as part of follow-up inspections.

Limitations

The information in this fire safety inspection report was obtained during a visit to the facility and during interviews with local factory management. It has not been possible to provide independent verification for all the information and data collected, and, therefore, The RSC cannot accept general responsibility for omissions or errors arising from inaccuracies in this report from the information obtained. The findings and recommendations in this report are not intended to imply, guarantee, ensure or warrant compliance with any government regulations. Additionally, the results do not imply in any way that compliance with the findings or recommendations as stated in this report will eliminate all hazards, risks or exposures or that hazards, risks or exposures not referred to in this report do not exist. Compliance with the findings and recommendations stated in this report does not relieve the factory owner from obligation to comply with specific project requirements, industry standards, or the provisions of any local government regulations.

General Factory Information

Factory Building name(s):

01. Building-2, 4-Storied RCC Medical & Childcare

02. Building-3, 2-Storied Utility Building

03. Building-4, Single Storied RCC Washing Building with Basement (Proposed 10 Storied)

04. Building-5, Single Storied RCC RMS Room

05. Building-6, Single Storied RCC Security Guard Room-1



06. Building-7, Single Storied RCC Security Guard Room-2



Factory Address: Ward No: 7, Biswaspara, Chandra, Kaliakoir, Gazipur Area, Gazipur.



Findings & Recommendations :



Table 1 summarizes the major fire safety issues identified during the inspection. Recommendations have been provided to address each issue. An implementation schedule shall be developed by the factory to remediate each of the findings. The specific timing of improvements, including any requested extensions due to design / installation constraints, shall be submitted to the RSC for review.

Table-1: Finding and recommendation for all buildings.

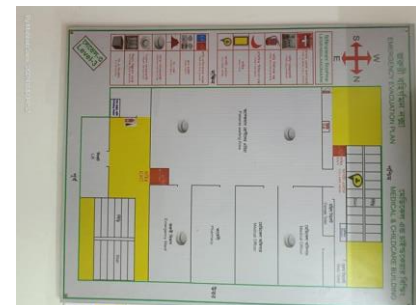
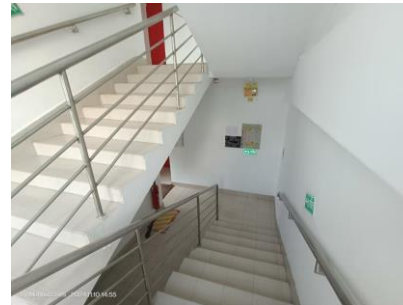
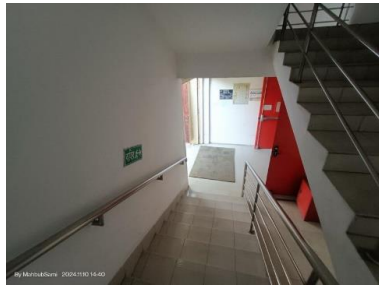
SI No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire Rated Construction	<p>Unsealed penetrations and openings are located in the fire-rated floor/ceiling assemblies due to Plumbing Pipes, Electrical Cable Riser and unprotected opening connecting ground floor to 1st floor having different occupancies. Location: Building-2 (4-Storeyed Medical & Childcare).</p>	<p>Seal all penetrations and openings in floor/ceiling assemblies to maintain the fire separation at least by 3-hr. The used sealer shall be 3rd party certified and installation shall be as per manufacturer's guideline. (Type-1 Construction).</p> <p>or,</p> <p>Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor if required. (Type-1 Construction).</p>	Within 3 months
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F-2	Fire Rated Construction	Elevator shaft was directly open into exit enclosure and floors. Location: Building-4 (Washing Building) & Building-2 (Medical & Childcare).	<p>Ensure minimum 1.5-hr fire rating for the doors of elevator shafts otherwise close the shafts area with 2-hr fire rated construction barrier and 1.5-hr fire rated doors. So, rearrange the facility to provide separate enclosure for lifts.</p> <p>If not possible anyway provide a minimum 2-hr fire- rated elevator shaft with listed fire rated lift landing door to separate from each floor level as per RSC Technical Guidelines Standard V 1.0 (Section: 6.14.3).</p> <p>Recommended to follow "SUPPLEMENTARY PAPER ON REMEDIATION GUIDANCE ELEVATOR OR LIFT SHAFT OPENING IN EXIT ENCLOSURES" for remediation. Plumbing shaft shall separate by 2-hr fire rated construction.</p>	Within 3 months
<div style="display: flex; justify-content: space-around; align-items: center;">   </div>				

F-3	Fire Rated Construction	<p>Catwalk has been constructed on high rack storage and the area of the intermediate deck creates a full floor where the size of the deck is more than 33% of the total floor area and requires fire rated separation.</p> <p>Location: Mezzanine Floor, Building-4 (Washing Building).</p>	<p>Remove all catwalk and stair from the multi-storied storage (combustible materials) rack facilities area.</p> <p>or</p> <p>Maintain fire separation between floor to floor as per BNBC 2006 Table 3.3.1. Provide required fire rating on the structural elements by following Table-3.2.4, 3.1.9 & Table 4.4.1 of the RSC Technical Guidelines Standard or Table 3.3.1 of BNBC-2006. Consult a qualified fire protection engineer to design the rated construction barriers in between two floors and in structural members. Factory shall submit all required product datasheet, installation design along with design philosophy to RSC for review prior to installation on site.</p>	Within 6 months
<div style="display: flex; justify-content: space-around;">   </div>				
F-4	Fire Rated Construction	<p>Storage room discharges directly into exit stair enclosure without vestibules.</p> <p>Location: Building-4 (Washing Building).</p>	<p>Openings from exit enclosure to storage shall be provided with a vestibule with fire rated construction and openings as per RSC Technical Guideline (Standard) V1-6.14.3. Provide a 2 hr. fire rated door on the exit stair side and a 1- hr. fire rated door on the storage side. The minimum width for vestibules shall not be less than 1.1m and length 1.8m as per BNBC, Part-4, Chapter-3, section 3.13.3. Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure.</p>	Within 3 months

					
F-5	Fire Rated Construction	The fire pump room is not provided with adequate fire separation. Location: Basement Fire Pump Room, Building-4 (Washing Building).	Provide fire pump room with 2 hr rated fire separation when not sprinklered and 1 hr rated fire separation when provided with automatic sprinklers, in accordance with NFPA 20. In the case exterior it shall be 50 ft away from another occupancy.	Within 3 months	
					

F-6	Means of Egress	<p>Width of exit stairs are less than 1.5 m (60 in.) and means of egress continuity was not maintained. Location: Building-3 (Utility Building) & Building-2 (Medical & Childcare).</p>	<p>In new and interim construction and constructed stairs post 24 November 2013, stairs shall have a minimum width of 1.5 m (60 in.) for all industrial occupancies in accordance with RSC standard 6.5.6.2.1.</p>	Within 3 months
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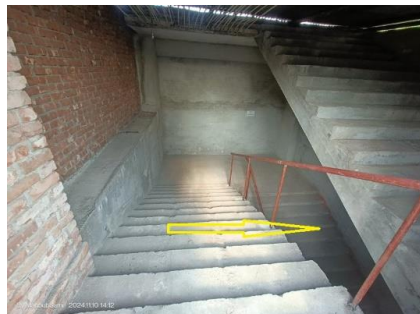




F-7	Means of Egress	<p>The exit stair enclosures are not separated from work areas and other spaces of floor by fire-rated construction due to unprotected opening, non-functional/missing door accessories, exceeds clearance between door bottom to floor etc.</p> <p>Location: Building-4 (Washing Building), Building-3 (Utility Building) & Building-2 (Medical & Childcare).</p>	<p>The exit stair enclosure shall be provided with a minimum 1-hr fire resistance rating for buildings with 3 or fewer stories and a minimum of 2-hr. fire resistance rating for buildings 4 or more stories. Provide 0.75 hr. fire rated door and seal all penetrations and openings by 1 hr. fire rated fire rated barrier construction for building with 3 or fewer stories. Provide 1.5 hr. fire rated door and seal all penetrations and openings by 2 hr. fire rated fire rated barrier construction for building with 4 or more stories.</p> <p>Provide a fire-resistive rated assembly between the exterior exit stairs and the building up to 10 ft. beyond the end of the stair to achieve the required separation. The rated assembly shall be approved and/or designed by a qualified fire protection engineer.</p> <p>Ensure that the fire doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.</p>	Within 3 months
				


F-8	Means of Egress	Parapets or guards are provided in occupied roof which is less than 1067mm (42 inch.). Location: Building-4 (Washing Building).	Provide parapets or guards with a minimum height of 1067mm (42 inch.).	Within 2 months
				
F-9	Means of Egress	Uneven path of travel and blockage in exit discharge. Locations: Building-4 (Washing Building).	Remove unnecessary items and level exit path to the public way.	Within 2 months



F-10	Means of Egress	<p>Provided guards at stairs are not as per standards. Location: Building-4 (Washing Building).</p>	<p>Open guards shall have intermediate rails or pattern such that a sphere 200 mm (8 in.) in diameter cannot pass through any opening up to a height of 865 mm (34 in.).</p>	Within 2 months
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F-11	Means of Egress	<p>The exits are not remotely located from each other (less than one-half maximum diagonal distance of pace) such that a single fire event could compromise both exits. Location: Building-3 (Utility Building).</p>	<p>Modify exit arrangement to meet RSC Technical Guidelines Standard V1.0 standard-6.6.6. Or, -Provide additional exit(s) to meet RSC Technical Guidelines Standard V1.0 standard-6.6.6.</p>	Within 3 months
<div style="display: flex; justify-content: space-around;">   </div>				
F-12	Means of Egress	<p>Building did not have stair designation signs and occupant load signs at all required locations. Location: Building-4 (Washing Building) & Building-2 (Medical & Childcare).</p>	<p>Provide stair designation signs and occupant load signs at all the required locations.</p>	Within 2 months

F-13	Means of Egress	Handrails are not provided on both sides of the exit stair on all floors. Location: Building-4 (Washing Building).	Provide handrails on both sides of the exit stair. Intermediate handrails shall be provided when the stair width exceeds 2.2 m (87 in. New handrails shall have a minimum height of 865 mm (34 in.) and a maximum height of 965 mm (38 in.) as measured from the leading edge of the tread.	Within 2 months
				
F-14	Means of Egress	No guard rails are provided at the required locations which may pose a falling hazard. Location: Building-4 (Washing Building).	Provide guard rails on open side with minimum height 42 inch. Open guards shall have intermediate rails or pattern such that a sphere 200 mm (8 in.) in diameter cannot pass through any opening up to a height of 865 mm (34 in.).	Within 2 months



F-15	Fire Alarm & Detection System (FADS)	<p>The factory has installed an addressable fire alarm & detection system which requires detailed review to confirm compliance with NFPA 72 and RSC Technical Guidelines (Standard). Location: All Buildings.</p>	<p>Submit the fire alarm system design to RSC for review. Once the design is reviewed, install and modify the fire detection and alarm system throughout the building in accordance with review comment, RSC Technical Guidelines (Standard) and NFPA 72. After installation/ modification the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing.</p>	<p>Design within 2 months, installation/ modification within 4 months</p>
F-16	Fire Detection ITM	<p>Inspection, testing, and maintenance for the fire detection system is not in accordance with NFPA 72.</p>	<p>Inspect, test and maintain the fire detection system, and keep written records on-site, in accordance with NFPA 72.</p>	<p>Within 1 month after installation</p>

F-17	Fire Extinguishers ITM	Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records onsite, in accordance with NFPA 10 and RSC standards.	Within 1 month
F-18	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes. Location: All Buildings.	Test the emergency lighting system on each floor and provide additional emergency fixtures to provide adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and exit discharge paths and minimum 2.5 lux along exit access aisles.	Within 1 month
F-19	Emergency Lighting ITM	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC standard. Location: All Buildings.	Inspect, test and maintain the exit sign and emergency lighting system in the accordance with The RSC standard. Keep written records on-site.	Within 1 month