

INITIAL FIRE SAFETY INSPECTION REPORT

Factory Name: Scandex Textile Industries Ltd.

RSC ID: 24831

ADDRESS: Uttar Gazaria, kaliakoir, Gazipur, Dhaka, Bangladesh.

Other Factories: None



Inspected By: Md. Ferdaus Jaman, Ahammad Kabir, Md. Kamrul Hasan and Md. Musa

Date: 31 December 2023

Fire Safety Inspection Report

Factory Name: Scandex Textile Industries Ltd

Introduction:

Scandex Textile Industries Ltd. complex was surveyed for fire safety on **31 December 2023** 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):

1. Building - 1 (Knitting & Dyeing Building 1), 9 storied RCC building with 2 Mezzanines, Constructed Dec 2016 - Jan 2022, Occupied in Jan 2022
2. Building - 2 (Dyeing Shed), Single storied steel shed building, Constructed Jun 2006 - Feb 2007, Occupied in Mar 2007
3. Building - 3 (Yarn Dyeing Building RCC and Yarn Dyeing Steel Shed), 7 storied RCC (Partial B+G+6), Constructed Sep 2018 - June 2021, Occupied in July 2021; Steel building (G+M+1), Constructed Jun 2018 - Feb 2021, Occupied in Feb 2021
4. Building - 4 (Knitting & Dyeing Building 2), 8 storied RCC building with 1 Mezzanine, Constructed Dec 2016 - Jan 2022, Occupied in Jan 2022
5. Building - 5 (ETP Plant Building), Six storied RCC building with basement and mezzanine: Constructed Aug 2020 - Jan 2023, Occupied in Jan 2023
6. Building - 6 (Utility Building-1), 2 storied RCC building, Constructed Jun 2006 - Feb 2007, Occupied in Mar 2007
7. Building - 7 (Utility Building-2), 4 storied RCC building, Constructed Jun 2020 - Feb 2021, Occupied in Mar 2021
8. Building - 8 (Chemical Store Shed), Single storied steel shed building, Constructed Sep 2020 - Nov 2022, Occupied in Nov 2022
9. Building - 9 (Utility Building-3), Single storied RCC building, Constructed Dec 2020 - Oct 2022, Occupied in Oct 2022
10. Building - 10 (33 kV Substation Building), Single storied RCC building, Constructed Jan 2021 - Dec 2023, Occupied in Jan 2024
11. Building - 11 (Medical Building), Single storied RCC building, Constructed Jun 2006 - Feb 2007, Occupied in Mar 2007
12. Building - 12 (Wastage Godown Shed), Single storied shed, Constructed Mar 2022 - Apr 2022, Occupied in May 2022
13. Building - 13 (Security Shed): Single storied shed, Constructed Jan 2021 - Apr 2021, Occupied in May 2021
14. Building - 14 (Lubricant Shed): Single storied steel shed, Constructed Mar 22 - Apr 2022, Occupied in May 2022
15. Building - 15 (Salt Soda Substore Shed): Single storied steel shed, Constructed Jan 2023 - Feb 2023, Occupied in Mar 2023
16. Building - 16 (Hydroses Chemical Store Shed): Single storied steel shed, Constructed Jan 2023 - Mar 2023, Occupied in Apr 2023

Factory Address: Uttar Gazaria, kaliakoir, Gazipur.

Findings & Recommendations :

Table 1 summarize the fire safety non-compliant issues identified during the inspection. Recommendations have been provided to address each issue with specific remediation timeline. 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:

Sl No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire Rated Construction	Building-01 and Building-04 The exit stairs are not separated from work areas, other spaces on each floor by fire-rated construction.	Provide minimum 2-hr fire rated construction for buildings 4 storied or more and 1-hr for upto 3 storied. Seal all unprotected openings to separate the exit stairs from work areas and other spaces on all floor levels by 90 minutes for 2 hr construction and 60 minutes for 1-hr construction. Ensure that the fire rated doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors and provide vestibules to avoid direct discharge from storage to exit stair enclosure. If fire rated doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system. Once fire doors are installed, every door in a stair enclosure serving more than 5 stories shall be provided with re-entry unless it meets The RSC Technical Guidelines (Standard) 6.8.3.1	Within 3 months

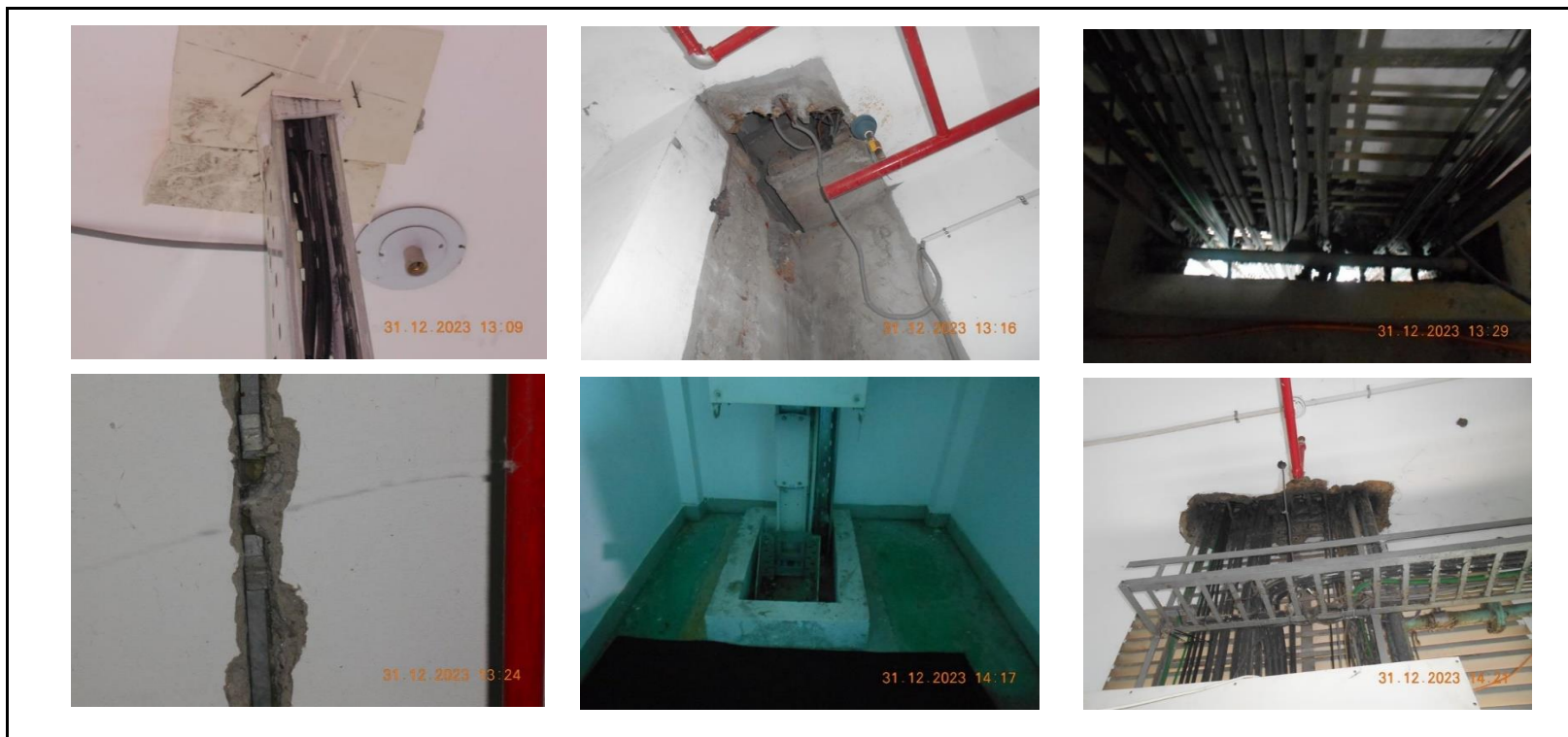
  				
F-2	Fire Rated Construction	Building-01 and Building-04 Unsealed penetrations and openings are located in the exit stair enclosures.	Seal all penetrations and openings in exit stair enclosure walls to maintain minimum 2 hrs fire separations.	Within 3 months

				
F-3	Fire Rated Construction	Building-01 and Building-04 Elevator shafts are directly open into the inside of floor area on several floors.	Modify the elevator shaft as per RSC Technical Guideline (Standard) V1-6.14.3. Elevator shaft shall be 2-hr fire rated opening protection from factory floor.	Within 6 months

 				
F-4	Fire Rated Construction	Building-01 and Building-04 Elevator shafts are directly open into the inside of exit enclosure on several floors.	An exit stairway shall not be built around a lift shaft unless both of them are located in a smoke proof enclosure and made of a material with fire resistance rating required for the type of construction of smoke proof enclosure. So, ensure the lift shaft is 2-hr fire rated including opening protection with similar rating.	Within 6 months



F-5	Fire Rated Construction	Building-01 and Building-04 Unsealed penetrations and openings are located in the fire rated floor/ceiling assemblies. Followings are the description of openings or penetrations indicating specific locations: 1. Passing of BBT riser through floor slabs from ground floor to top floor of the building. 2. Passing of IT/Network cable riser through floor slabs from ground floor to top floor of the building. 3. Plastic pipes penetrate the floor slabs in toilet block of the building. 4. Steamline/GI pipes penetrate the floor slabs of the building. 5. Plastic pipes of wastage water discharge penetrate the floor slabs of the building. 7. Electrical cable riser through rated walls on several floors of the building. 8. Expansion joints through rated slabs on several floors of the building.	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 datasheet. Or Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor if required. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.	Within 3 months
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F-6	Fire Rated Construction	Building-01 and Building-04 Rooms used for combustible storage are not properly separated by fire rated construction due to unprotected openings and penetrations.	Separate or seal the unprotected openings and penetrations of the storage rooms by a minimum 1-hr fire rated construction.	Within 3 months
 				

F-7	Fire Rated Construction	Building-01 and Building-04 Storage discharges directly into the exit stair discharge.	Openings from exit enclosure to storage room, shall be provided with a vestibule with fire rated construction and openings. Provide a 1.5 hr. fire rated door on the exit stair side and a 1-hr. fire rated door on the store side. Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure.	Within 4 months
				

F-8	Fire Rated Construction	Building-04 Fire pump room, WTP booster pumps and electrical panels discharges directly into the exit stair-1 enclosure on basement floor.	Openings from exit enclosure to fire pump, WTP booster pumps, and electrical panels shall be provided with a vestibule with fire rated construction and openings. Provide a 1.5 hr. fire rated door on the exit stair side and a 1.5-hr. fire rated door on the fire pump, buster pumps, and electrical panels side. Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure. Or remove the buster pumps, and electrical panels to a safe location.	Within 4 months
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F-9	Fire Rated Construction	Building-04 Chemical storage area on 1st mezzanine is not properly separated by fire-rated construction due to openings & penetrations with Building-2 (Dyeing & Finishing Shed).	Separate the chemical storage room by 4-hr fire rated construction. Seal all penetrations and protect the openings to maintain the required fire separations for 4-hrs. Opening is not permitted for 4-hrs fire rated separation. Keep 16-points SDS of all chemicals in the storage area. Note: Construction type shall be Type-1 and separation shall be as per Table 3.2.1 of BNBC-2006.	Within 3 months
				

F-10	Fire Rated Construction	Building-04 The exit discharge path serving exit stair-1 & 2 is less than 10 ft. wide and is not separated from the building interior.	Seal all penetrations and openings to the interior of the building along the discharge path, up to a height of 10 ft., to provide a minimum 2-hr fire separation. Alternatively, provide a second remote discharge path to the public way.	Within 3 months
				

F-11	Means of Egress	Building-01 and Building-04 Electrical SDB panel has been found in the exit stair.	Remove the electrical SDB panel from exit stair to a safe location.	Within 1 month
				

F-12	Means of Egress	Building-01 and Building-4 Sliding doors doors are provided at building exits, exit stairs, along egress routes, exit discharge on roof floor.	Replace all collapsible gates/ sliding doors/ rolling shutter doors along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize specialized door locking features complying with NFPA101.	Within 1 week
				

F-13	Means of Egress	Building-01 and Building-04 Parapets are not provided as per The RSC Technical Guidelines (Standard) V1-3.4.2.1.5.	Provide parapets or guards with a minimum height of 1067mm (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 3 months
				

F-14	Means of Egress	Building-01 and Building-04 Handrails/Guards are not provided as per The RSC Technical Guidelines (Standard V1-3.4.2.1.5.	New and interim 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. 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 3 months
 				

F-15	Means of Egress	Building-01, Building-02 and Building-04 Fire evacuation maps are not posted at the entrance to each exit stair.	Fire evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month
F-16	Means of Egress	Building-01, Building-02 and Building-04 Building did not have stair designation signs or occupant load signs at the required locations.	Provide stair designation signs and occupant load signs at the required locations.	Within 1 month

F-17	Egress Lighting	Building-01, Building-02 and Building-04 Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes.	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 3 months
				

F-18	Egress Lighting	Building-01, Building-02 and Building-04 Exit signs are not provided at exit on several locations.	Provide exit signs above all exits to the exterior and all doors to the exit stair.	Within 1 month
F-19	Egress Lighting	Building-01, Building-02 and Building-04 The directional signs are not provided where there is a change in direction and where the continuation of the egress path is not obvious.	Install illuminated directional signs shall be provided where there is a change in the direction for the path of travel and the direction to an exit is not obvious.	Within 1 month

				
F-20	Egress Lighting	Building-01, Building-02 and Building-04 Manual on-off switch is provided for emergency lighting / exit signage units.	Remove manual on/off switches from emergency lighting /exit signage units to prevent them from being switched off.	Within 1 month

				
F-21	Egress Lighting	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5.	Inspect, test and maintain the exit sign and emergency lighting system in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5. Keep written records on-site.	Within 3 months

F-22	Fire Alarm & Detection system	Building-01, Building-02 and Building-04 Automatic fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard).	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 buildings in accordance with review comment, Accord/ RSC Technical Guidelines (Standard) and NFPA 72. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with Table-14.3.1 of NFPA 72.	Design Review within 2 months and installation within 4 months
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F-23	ITM of Fire Alarm & Detection system	Building-01, Building-02 and Building-04 Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72 and and The RSC Technical Guidelines (Standard).	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and The RSC Technical Guidelines (Standard) and keep written records on-site	Within 1 month (after installation)
F-24	Fire Protection System (Standpipe)	Building-01, Building-02 and Building-04 The single storied non-rated Dyeing Shed is interconnected with the rated high-rise building-2 & 4 on ground floor, which is defined as a single fire compartment. So, the sprinkler system along with class-I standpipe system is mandatory for the overall compartment means Dyeing Shed along with the building building-1 & 4 as per NFPA 13,14, 20, 22, 24 and RSC Technical Guideline (Standard).	Design and install automatic sprinkler system along with standpipe throughout the building-2,4 and Dyeing Shed in accordance with NFPA 13, 14, 20, 22 & 24.	Design Review within 2 months and installation within 4 months.

				
F-25	Fire Protection System(ITM of fire pump)	Building-01, Building-02 and Building-04 Inspection, testing, and maintenance for the fire pump is not in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the fire pump in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)

F-26	Fire Protection System(ITM of Standpipe)	Building-01, Building-02 and Building-04 Inspection, testing, and maintenance for the Standpipe system is not in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the standpipe system in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)
F-27	Fire Protection System(ITM of Sprinkler)	Building-01, Building-02 and Building-04 Inspection, testing, and maintenance for the Sprinkler system is not in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the standpipe system in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)

F-28	ITM of Fire Extinguishers	Building-01, Building-02 and Building-04 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 The RSC Technical Guidelines (Standard).	Within 3 months
F-29	Human Element Program	Hot-work permit policy was not found in the factory.	A hot-work permit system in accordance with NFPA 51B shall be provided for any construction in an occupied facility.	Within 1 month

F-30	Fire Rated Construction	Building-03 The exit stairs are not separated from work areas, other spaces on each floor by fire-rated construction.	Provide minimum 2-hr fire rated construction for buildings 4 storied or more and 1-hr for upto 3 storied. Seal all unprotected openings to separate the exit stairs from work areas and other spaces on all floor levels by 90 minutes for 2 hr construction and 60 minutes for 1-hr construction. Ensure that the fire rated doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors and provide vestibules to avoid direct discharge from storage to exit stair enclosure. If fire rated doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system. Once fire doors are installed, every door in a stair enclosure serving more than 5 stories shall be provided with re-entry unless it meets The RSC Technical Guidelines (Standard) 6.8.3.1	Within 3 months
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F-31	Fire Rated Construction	Building-03 The main structural elements of factory building are constructed by steel which is non-rated structure and were found in exposed condition without any fire protection.	For interim construction, the building shall be Type 1 or Type 2 construction as required in BNBC 2006 Part 3 Table 3.2.4. So, provide require rating for the structural elements of the building following BNBC 2006-Table 3.2.4, 3.1.9 and 3.3.1. Factory shall ensure that, all the design, datasheet, certificate, and the design-philosophy has been reviewed from the RSC prior to install the passive fire protection system.	Within 6 months
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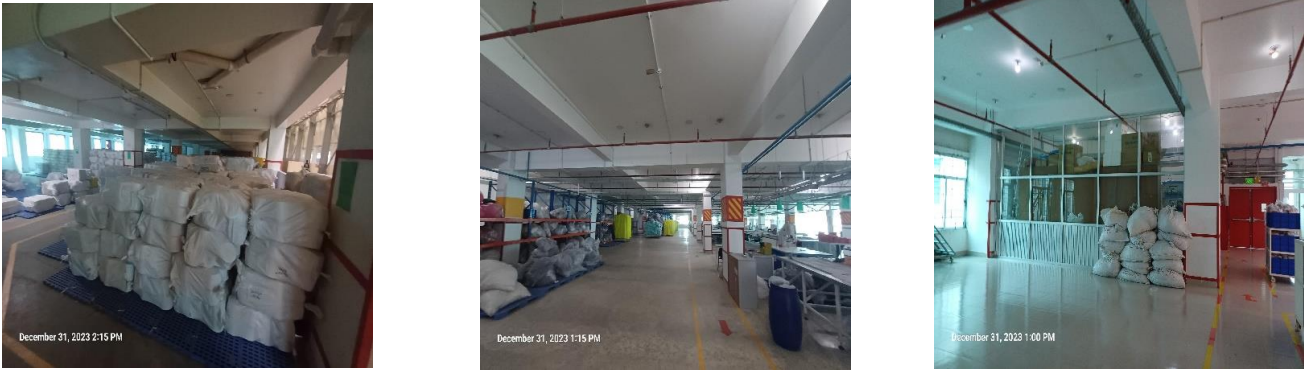
F-32	Fire Rated Construction	Building-03 Elevator shafts are directly open into the inside of exit enclosure on several floors.	An exit stairway shall not be built around a lift shaft unless both of them are located in a smoke proof enclosure and made of a material with fire resistance rating required for the type of construction of smoke proof enclosure. So, ensure the lift shaft is 2-hr fire rated including opening protection with similar rating.	Within 6 months
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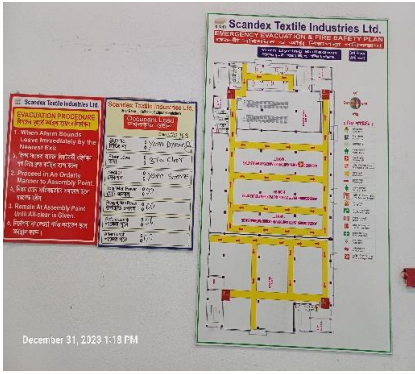
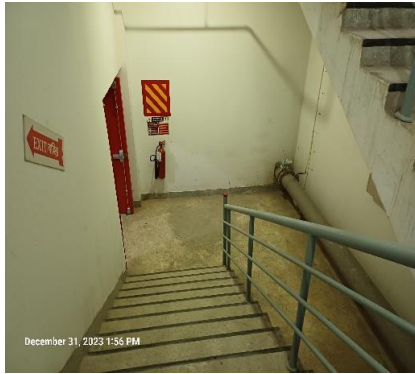


F-33	Fire Rated Construction	Building-03 Elevator shafts are directly open into the inside of floor area.	Modify the elevator shaft as per RSC Technical Guideline (Standard) V1-6.14.3. Elevator shaft shall be 2-hr fire rated opening protection from factory floor.	Within 6 months
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F-34	Fire Rated Construction	Building -03 Unsealed penetrations and openings are located in the fire rated floor/ceiling assemblies. Followings are the description of openings or penetrations indicating specific locations: 1. Passing of BBT riser through floor slabs. 2. Plastic pipes penetrate the floor slabs in toilet block of the building. 3. Steamline/GI pipes penetrate the floor slabs of the building. 4. Steamline/GI pipes penetrate the floor slabs of the building. 5. Plastic pipes of wastage water discharge penetrate the floor slabs of the building. 7. Electrical cable riser through rated walls on several floors of the building.	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 datasheet. Or Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor if required. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.	Within 3 months
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F-35	Fire Rated Construction	Building-03 Rooms used for combustible storage are not properly separated by fire rated construction due to unprotected openings and penetrations on the 4th, 3rd, 2nd, and 1st floor.	Separate or seal the unprotected openings and penetrations of the storage rooms by a minimum 1-hr fire rated construction.	Within 3 months

				
F-36	Fire Rated Construction	Building-03 Storage areas and basement discharges directly into the exit stair on the basement, 2nd & 3rd floor.	Openings from exit enclosure to storage rooms and basement shall be provided with a vestibule with fire rated construction and openings. Provide a 1.5 hr. fire rated door on the exit stair side and a 1-hr. fire rated door on the store side. Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure.	Within 4 months

		 December 31, 2023 1:18 PM	 December 31, 2023 1:56 PM	
F-37	Fire Rated Construction	Building-03 Areas used for in-process storage of combustible materials are open to the surrounding occupancy 2nd floor and ground floor.	Provide defined storage areas and limit the storage arrangement as follows: - 1. General Condition: Maximum height of 2.4m and maximum area of 23m². Separate areas of unenclosed combustible storage by a minimum clear distance of 3m. Or, 2. If sprinkler protected: maximum height of 3.66m and maximum area of 93m². Separate areas of unenclosed combustible storage by a minimum clear distance of 3m. Or, 3. Enclose the storage area from the surrounding occupancy with a minimum 1-hour construction.	Within 3 months

 				
F-38	Fire Rated Construction	Building-03 Dining area is not separated by fire-rated construction from yarn dyeing area & production area on the 1st floor (openings and penetrations).	Separate the dining area from others occupancy by a minimum 3-hr fire-rated construction. Also, provide at least 2 exits leading directly to the exit stair. Seal and/or protect all openings to maintain the required fire separations.	Within 3 months



F-39	Fire Rated Construction	Building-03 Exit stair-3 & 4 discharge the occupant inside the interior of the building on the ground floor.	Maximum of 50 percent of the number and capacity of the exit enclosures can discharge through areas on the level of exit discharge where all of the following are met: (1) Automatic sprinkler protection is provided throughout the level of exit discharge or portion of the level of discharge where separated from non sprinklered portions of the floor by fire barriers with the same fire resistance rating as the exit enclosure. (2) The interior discharge is not through a storage or hazardous occupancy. (3) The entire area of the level of exit discharge is separated from areas below by construction having a fire resistance rating not less than that required for the exit enclosure. (4) The way to the exterior shall be free and unobstructed and shall be readily visible and identifiable from the point of discharge of the interior exit.	Within 3 months
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F-40	Fire Rated Construction	Building-03 Exterior of the stair enclosure-2 on the ground and first floor is not separated from the VRF Central AC & compressor dryer.	Exterior exit stairs shall be separated from the building with the required fire rating requirements of the building. The rating of the exterior wall shall extend 3.05 m (10 ft) beyond the ends of the stair structure opening.	Within 3 months

 				
F-41	Means of Egress	Building -03 Electrical SDB panel has been found in the exit stair-2 on the 1st floor & basement.	Remove the electrical SDB panel from exit stair to a safe location.	Within 1 month

 				
F-42	Means of Egress	Building-03 Building did not have stair designation signs or occupant load signs at all the required locations.	Provide stair designation signs and occupant load signs at the required locations.	Within 1 month

F-43	Means of Egress	Building-03 East side exit door width of the yarn dyeing shed found 32 in.	Doors in a means of egress shall have a minimum width of 1 m (39 in.).	Within 1 month
				

F-44	Egress Lighting	Building-03 Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes.	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 3 months
 				

F-45	Egress Lighting	Building-03 Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5.	Inspect, test and maintain the exit sign and emergency lighting system in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5. Keep written records on-site.	Within 3 months
F-46	Fire Alarm & Detection system	Building-03 Automatic fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard).	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 buildings in accordance with review comment, Accord/ RSC Technical Guidelines (Standard) and NFPA 72. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with Table-14.3.1 of NFPA 72.	Design Review within 2 months and installation within 4 months

F-47	ITM of Fire Alarm & Detection system	Building-03 Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72 and and The RSC Technical Guidelines (Standard).	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and The RSC Technical Guidelines (Standard) and keep written records on-site	Within 1 month (after installation)
F-48	Fire Protection System (Sprinkler & Standpipe)	Building-03 The yarn dyeing shed is interconnected with the high-rise RCC Building-3 on ground floor, which is defined as a single fire compartment. So, the sprinkler system along with class-I standpipe system is mandatory for the overall compartment means Yarn Dyeing Shed along with the RCC Building-3 as per NFPA 13,14, 20, 22, 24 and RSC Technical Guideline (Standard).	Design and install automatic sprinkler system along with standpipe throughout the building-2,4 and Dyeing Shed in accordance with NFPA 13, 14, 20, 22 & 24.	Design Review within 2 months and installation within 4 months.

F-49	Fire Protection System(ITM of Standpipe)	Building-03 Inspection, testing, and maintenance for the Standpipe system is not in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the standpipe system in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)
F-50	Fire Protection System(ITM of Sprinkler)	Building-03 Inspection, testing, and maintenance for the Sprinkler system is not in accordance with NFPA 13, 14, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the standpipe system in accordance with NFPA 13, 14, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)

F-51	ITM of Fire Extinguishers	Building-03 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 The RSC Technical Guidelines (Standard).	Within 1 month
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F-52	Fire Rated Construction	Building-05 The exit stairs are not separated from work areas, other spaces on each floor by fire-rated construction.	Provide minimum 2-hr fire rated construction for buildings 4 storied or more and 1-hr for upto 3 storied. Seal all unprotected openings to separate the exit stairs from work areas and other spaces on all floor levels by 90 minutes for 2 hr construction and 60 minutes for 1-hr construction. Ensure that the fire rated doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors and provide vestibules to avoid direct discharge from storage to exit stair enclosure. If fire rated doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system. Once fire doors are installed, every door in a stair enclosure serving more than 5 stories shall be provided with re-entry unless it meets The RSC Technical Guidelines (Standard) 6.8.3.1	Within 3 months
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F-53	Fire Rated Construction	Building-05 Elevator shafts are directly open into the inside of floor area on several floors.	Modify the elevator shaft as per RSC Technical Guideline (Standard) V1-6.14.3. Elevator shaft shall be 2-hr fire rated opening protection from factory floor.	Within 6 months
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F-54	Fire Rated Construction	Building-05 Elevator shafts are directly open into the inside of exit enclosure on several floors.	An exit stairway shall not be built around a lift shaft unless both of them are located in a smoke proof enclosure and made of a material with fire resistance rating required for the type of construction of smoke proof enclosure. So, ensure the lift shaft is 2-hr fire rated including opening protection with similar rating.	Within 6 months

 				
F-55	Means of Egress	Building -05 Parapets are not provided as per The RSC Technical Guidelines (Standard) V1-3.4.2.1.5.	Provide parapets or guards with a minimum height of 1067mm (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 3 months



F-56	Egress Lighting	Building-05 Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes.	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 3 months
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F-57	Egress Lighting	Building-05 Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5.	Inspect, test and maintain the exit sign and emergency lighting system in accordance with The RSC Technical Guidelines (Standard) V1-3.4.2.1.5. Keep written records on-site.	Within 3 months
F-58	Fire Alarm & Detection system	Building-05 Automatic fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard).	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 buildings in accordance with review comment, Accord/ RSC Technical Guidelines (Standard) and NFPA 72. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with Table-14.3.1 of NFPA 72.	Design Review within 2 months and installation within 4 months

F-59	ITM of Fire Alarm & Detection system	Building-05 Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72 and and The RSC Technical Guidelines (Standard).	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and The RSC Technical Guidelines (Standard) and keep written records on-site	Within 1 month (after installation)
F-60	Fire Protection System (Standpipe)	Building-05 The standpipe system installation requires detailed review to confirm compliance with NFPA 14, 20, 22, 24 and RSC Technical Guideline (Standard).	Submit the standpipe system drawing to RSC for review. Once reviewed, install or modify the standpipe system throughout the building in accordance with RSC Technical Guideline (Standard) and NFPA 14, 20,22 and 24. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the standpipe system.	Design Review within 2 months and installation within 4 months.

F-61	Fire Protection System(ITM of Standpipe)	Building-05 Inspection, testing, and maintenance for the Standpipe system is not in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the standpipe system in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)
F-62	ITM of Fire Extinguishers	Building-05 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 The RSC Technical Guidelines (Standard).	Within 1 month

F-63	Means of Egress	Building-06 Sliding doors/rolling shutter doors are provided at building exits, exit stairs, along egress routes, exit discharge.	Replace all collapsible gates/ sliding doors/ rolling shutter doors along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize specialized door locking features complying with NFPA101.	Within 1 week
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F-64	Means of Egress	Building-06 Building did not have stair designation signs or occupant load signs at the required locations.	Provide stair designation signs and occupant load signs at the required locations.	Within 1 month
F-65	Means of Egress	Building-06 Parapets are not provided as per The RSC Technical Guidelines (Standard) V1-3.4.2.1.5.	Provide parapets or guards with a minimum height of 1067mm (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 1 month

				
F-66	Egress Lighting	Building-06 Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes.	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 3 months

F-67	Fire Alarm & Detection system	Building-06 Automatic fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard).	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 buildings in accordance with review comment, Accord/ RSC Technical Guidelines (Standard) and NFPA 72. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with Table-14.3.1 of NFPA 72.	Design Review within 2 months and installation within 4 months
F-68	ITM of Fire Alarm & Detection system	Building-06 Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72 and and The RSC Technical Guidelines (Standard).	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and The RSC Technical Guidelines (Standard) and keep written records on-site	Within 1 month (after installation)

F-69	ITM of Fire Extinguishers	Building-06 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 The RSC Technical Guidelines (Standard).	Within 1 month
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F-70	Fire Rated Construction	Building-07 The exit stairs are not separated from work areas, other spaces on each floor by fire-rated construction.	Provide minimum 2-hr fire rated construction for buildings 4 storied or more and 1-hr for upto 3 storied. Seal all unprotected openings to separate the exit stairs from work areas and other spaces on all floor levels by 90 minutes for 2 hr construction and 60 minutes for 1-hr construction. Ensure that the fire rated doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors and provide vestibules to avoid direct discharge from storage to exit stair enclosure. If fire rated doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system. Once fire doors are installed, every door in a stair enclosure serving more than 5 stories shall be provided with re-entry unless it meets The RSC Technical Guidelines (Standard) 6.8.3.1	Within 3 months
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F-71	Means of Egress	Building-07 A single means of exit has been provided for all the floors of 4-storied utility building-2 (Building-7) which does not comply with the standard.	Provide additional exit following Table 6.6.2 of The RSC Technical Guidelines (Standard).	Within 3 months



F-72	Fire Alarm & Detection system	Building-07 Automatic fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard).	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 buildings in accordance with review comment, Accord/ RSC Technical Guidelines (Standard) and NFPA 72. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with Table-14.3.1 of NFPA 72.	Design Review within 2 months and installation within 4 months
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F-73	ITM of Fire Alarm & Detection system	Building-07 Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72 and and The RSC Technical Guidelines (Standard).	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and The RSC Technical Guidelines (Standard) and keep written records on-site	Within 1 month (after installation)
F-74	Fire Protection System (Standpipe)	Building-07 Standpipe installation requires detailed review to confirm compliance with NFPA 14, 20, 22, 24 and RSC Technical Guideline (Standard).	Submit the standpipe system drawing to RSC for review. Once reviewed, install or modify the standpipe system throughout the building in accordance with RSC Technical Guideline (Standard) and NFPA 14, 20,22 and 24. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the standpipe system.	Design Review within 2 months and installation within 4 months.



F-75	Fire Protection System(ITM of fire pump)	Building-07 Inspection, testing, and maintenance for the fire pump is not in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the fire pump in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)
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F-76	Fire Protection System(ITM of Standpipe)	Building-07 Inspection, testing, and maintenance for the Standpipe system is not in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the standpipe system in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 Month (after installation)
F-77	ITM of Fire Extinguishers	Building-07 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 The RSC Technical Guidelines (Standard).	Within 1 Month

F-78	Means of Egress	Building-09 Rolling Shutter doors are provided at building exit on ground floor.	Replace all rolling shutter doors along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize specialized door locking features complying with NFPA101.	Within 1 week
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F-79	Means of Egress	Building-09 Fire evacuation maps are not posted at the entrance to each exit stair.	Fire evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month
F-80	Means of Egress	Building-09 Building did not have occupant load signs at the required locations.	Provide occupant load signs at the required locations.	Within 1 month

F-81	Means of Egress	Building-09 Changes in level found exceeding 535 mm (21 in.) at exit discharge.	Walking surfaces shall be mostly level as per 6.3.4 of The RSC Technical Guidelines (Standard).	Within 1 month
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F-82	Fire Alarm & Detection system	Building-09 Automatic fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard).	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 buildings in accordance with review comment, Accord/ RSC Technical Guidelines (Standard) and NFPA 72. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with Table-14.3.1 of NFPA 72.	Design Review within 2 months and installation within 4 months
F-83	ITM of Fire Alarm & Detection system	Building-09 Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72 and and The RSC Technical Guidelines (Standard).	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and The RSC Technical Guidelines (Standard) and keep written records on-site	Within 1 month (after installation)

F-84	ITM of Fire Extinguishers	Building-09 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 The RSC Technical Guidelines (Standard).	Within 1 month
F-85	Fire Rated Construction	Building-08 The main structural elements of factory building are constructed by steel which is non-rated structure and were found in exposed condition without any fire protection.	For interim construction, the building shall be Type 1 or Type 2 construction as required in BNBC 2006 Part 3 Table 3.2.4. So, provide require rating for the structural elements of the building following BNBC 2006-Table 3.2.4, 3.1.9 and 3.3.1. Factory shall ensure that, all the design, datasheet, certificate, and the design-philosophy has been reviewed from the RSC prior to install the passive fire protection system.	Within 6 months

				
F-86	Means of Egress	Building-08 Changes in level found exceeding 535 mm (21 in.) at exit discharge.	Walking surfaces shall be mostly level as per 6.3.4 of The RSC Technical Guidelines (Standard).	Within 1 month



F-87	Means of Egress	Building-08 Building did not have occupant load signs at the required locations.	Provide occupant load signs at the required locations.	Within 1 month
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F-88	Fire Alarm & Detection system	Building-08 Automatic fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard).	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 buildings in accordance with review comment, Accord/ RSC Technical Guidelines (Standard) and NFPA 72. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with Table-14.3.1 of NFPA 72.	Design Review within 2 months and installation within 4 months
F-89	ITM of Fire Alarm & Detection system	Building-08 Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72 and and The RSC Technical Guidelines (Standard).	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and The RSC Technical Guidelines (Standard) and keep written records on-site	Within 1 month (after installation)

F-90	Fire Alarm & Detection system	Building-10, 11, 12, 13, 14 & 15 Automatic fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard).	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 buildings in accordance with review comment, Accord/ RSC Technical Guidelines (Standard) and NFPA 72. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with Table-14.3.1 of NFPA 72.	Design Review within 2 months and installation within 4 months
F-91	ITM of Fire Alarm & Detection system	Building-10, 11, 12, 13, 14 & 15 Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72 and and The RSC Technical Guidelines (Standard).	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and The RSC Technical Guidelines (Standard) and keep written records on-site	Within 1 month (after installation)