Name of the Factory	: **Shikder Printing Ltd.**
Address of the Factory	: Rangs Arcade (5th floor) 153/A Gulshan Avenue Gulshan North C/A Dhaka-1212, Bangladesh
Present Status of the Factory	: **Under Operation**
Structural assessment conducted by	: Alliance
Date of Structural Inspection	: 12 Jul 2014
Fire & Electrical assessment conducted by	: Alliance
Date of Fire & Electrical Inspection	: 12 Jul 2014

BASIC INFORMATION:

The present garment factory is a single storied building. The following general information was noted:

i.	Building Usage Type	: Printing Factory.
ii.	Structural System	: The building consists of steel circular columns, steel truss roof with tin shed, and RCC corner columns.
iii.	Floor System	: Single Storied Structure.
iv.	Floor Area	: 6600 sft.
v.	No. of Stories	: Single storied
vi.	Construction Year	: 2010
vii.	Foundation Type	: Unknown
viii.	Design Drawings	: Not Available.
ix.	Soil investigation Report	: Available
x.	Construction Materials chips).	: Pre-Fabricated Steel Structure& Reinforced Concrete (brick
xi.	Generator	: Ground Floor

RECOMMENDATIONS FOR CORRECTIVE ACTION:

The recommendations of corrective action for Structural, Fire and Electrical Safety comprises of Short Term, Mid Term and Long Term basis are as follows:

The recommendations for Structural Safety corrective actions are:

Immediate : NA

Short Term : NA

Mid Term (6 Weeks) :

i. Engage a qualified structural engineer to develop the required documents to confirm the structural integrity of the buildings. Documents must comply with Alliance Standard Part 8 Section 8.19 and 8.20

ii. Have a qualified structural engineer document compliance with the seismic and wind requirements stated in the 2006 BNBC.

iii. Engage a qualified structural engineer to confirm satisfactory structural performance of the buildings under wind loading.

iv. Under guidance from a qualified structural engineer, address all areas of needed maintenance by correcting the identified issues.

v. Have a qualified structural engineer prepare credible as-built documents based on the requirements of Part 8 Section 8.19 of the Alliance Standard.

vi. Obtain Certificates of Occupancy and provide for review.

vii. Repair the exterior façade system to prevent water intrusion.

Long Term : NA

The recommendations for Fire Safety corrective actions are:

Immediate	NA
Short Term (3 Weeks)	Remove all locking devices from all egress doors and means of egress components in accordance with Alliance Standard Section 6.8. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.
Mid Term (6 Weeks)	Develop a testing and maintenance program that ensures the emergency power for exit signs is tested at least once per year. If battery operated signs are used, these lights are tested on a monthly basis. Functional testing of battery powered signs is provided for a minimum 90 min once per year. Functional testing of battery powered signs is provided for a minimum 90 min once per year. Post the occupant loads for every assembly and production floor in a conspicuous space near the main exit or exit access doorway for the space. Install signage at required locations and on required equipment of standpipe system. Signage must comply with NFPA 14. Complete Fire Department pre-planning activities with the local Fire Service and Civil Defense. Apply to authority for issuance of the Certificates of Occupancy for each building and ancillary structure is according to building use. Pursue the matter to expedite.
Long Term (6 Months)	Provide training and certification for at least 25% of workers in firefighting, first aid, and rescue by the appropriate authority. Install illuminated exit and directional signs with backup power at entrances to exits and along the path of egress anywhere the continuation of egress is not obvious or there is a change in the direction of the path of travel. Establish an inspection, testing, and maintenance program for all fire extinguishers. Program needs to comply with the requirements of NFPA 10 chapter 7. Establish written corporate and plant policies on housekeeping to ensure scheduled cleaning for floors, walls, ceilings, and supply and return air ventilation systems.

	Promptly reschedule skipped cleanings. Provide a documented line of authority for authorizing a cleaning delay and rescheduling. Develop a hot-work permit program. The program must comply with the requirements of NFPA 51B. Establish an inspection, maintenance, and testing program for the standpipe and hose system. Program needs to comply with the requirements of NFPA 25.

The recommendations for Electrical Safety corrective actions are*:*

Immediate (3 to 6 Days)	Disconnect the panel from the electrical service and clean interior components of all dust and debris. Seal all openings within the enclosure to prevent dust and debris from entering.
Short Term (3 Weeks)	Establish an inspection testing and maintenance program for the Uninterruptable Power Supply (UPS) and associated components. The program must base on the following: (1) Manufacturer's recommendations (2) Manufacturer's instruction manuals. Establish a routine maintenance and testing program for the emergency generator. The program shall be based on all of the following: (1) Manufacturer's recommendations (2) Manufacturer's Instruction manuals Use cover made of non-combustible material to block the open circuit breaker hole or install circuit breakers on required places. Make sure the holes are properly sealed so that the panels are dust and vermin proof.
Mid Term (6 Weeks)	Provide permanent identification marking mentioning name of panels (i.e. SDB-1) on a durable material sheet posted on panels' door. Also include danger sign mentioning the voltage level (i.e. DANGER: 440 VOLTS) on panel door. Provide a capacity information label which contains the current carrying capacity and size of main cable, rated capacity of circuit breaker and the busbar (with dimension).Display updated panel schedules posted on panels' door (inner side). Remove the un-terminated cables or terminate cables. Lighting and socket circuits must be separated at the noted locations. Have a qualified electrician separate the lighting and sockets into separate circuits. Install phase separators between terminal connections. Verify phase separators are installed at all remaining locations.

Long Term (6 Months)	Consult with a qualified electrical engineer to prepare the lighting protection system layout diagram and ensure the required numbers and appropriate spacing of vertical and horizontal conductors. Consult a qualified engineer to design the generator room with adequate clearance on all sides of the generator. Complete Thermographic scans at least on a three year cycle. Thermographic scans should be completed in accordance with the Standard for Infrared Inspection of Electrical Systems & Rotating Equipment and NFPA70B or a comparable standard. Develop an Insulation Resistance Measurement Program that ensures deterioration of insulation resistance will be identified quickly. Testing should be in compliance with International Electrical Testing Association (NETA). All transformers, switchgears etc. shall be subject to an insulation resistance measurement test to ground after installation but before any wiring is connected. Insulation tests shall be made between open contacts of circuit breakers, switches etc. and between each phase and earth.