Name of the Factory	:	**SILVER STYLE & DESIGNE LTD.**
Address of the Factory	:	Zirabo, Ashulia, Savar, Dhaka
Dhaka Present Status of the Factory	:	**Under Operation**
Structural assessment conducted by	:	Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	:	28 May, 2014
Fire & Electrical assessment conducted by	:	Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	:	13 July, 2014 & 14 July, 2014

Basic Information: The present garment factory is a commercial building with beam-column frame system. The following general information was noted:

i.	Building Usage Type	: Garment factory
ii.	Structural System	: Beam slab frame
iii.	Floor System	: Beam slab
iv.	Floor Area	: Total floor area of the factory is26000sqft
v.	No. of Stories	: 5 storied
vi.	Construction Year	: 2008
vii.	Foundation Type	: Unavailable
viii.	Design Drawings	: Available
ix.	Soil investigation Report	: Available (July 2008)
x.	Construction Materials	: Unavailable
xi.	Generator	: Adjacent to exit door

Recommendations for Corrective Action: The recommendations of corrective action for both Structural and Fire & Electrical Safety are as follows:

The recommendations for Structural Safety corrective actions are:

Immediate (Now): NA

Mid Term (Within 6 Weeks): NA

Long Term (Within 6 Months):

1. Building engineer to check the capacity of all column/truss connections in Production Building (Highlighted in the observations of this report) for lateral wind and vertical loading as per BNBC and make any necessary alterations
2. Engage engineer to assess the lateral stability of the roof over the Production Building for lateral wind loading as per BNBC and remediate if required.
3. Building engineer to assess capacity of purlins for all relevant load cases as per BNBC and remediate if required.

The recommendations for Fire Safety corrective actions are:

Immediate (Within 1 month):

1. Remove locking features from all egress doors / gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.
2. Remove all storage from exit stairs and egress paths.

3. Replace all sliding doors along the means of egress with side hinged, swinging egress doors. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.

4. 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.

5. Provided emergency evacuation plan in all building exit in accordance with ACCORD standard. (13.3.1).

6. Conduct fire drill and keep a record in accordance with ACCORD standard. (13.2.1).

7. Modify the egress door to swing in the direction of egress travel. Or remove the door.

8. Provide additional hose cabinet or hose reel to accommodate all factory floor area.

9. Provide exit signs above all exits to the exterior.

Short Term (Within 3 Months):

1. Provide minimum 1.5-hr fire rated doors and seal all unprotected openings to separate the exit stairs from work areas and other building spaces on all floor levels. 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.

2. Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction. Where separate storage rooms may not be feasible, provide defined storage areas and limit the storage arrangement as follows:

   -Maximum height of 2.4m and maximum area of 23m2

   -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.

3. Provide additional means of egress.

4. Provide handrails on at least one side of exit stair.

5. Provide emergency evacuation plan posted at the entrances in every floor.

6. Provide fire alarm system in accordance with NFPA 72.

7. Separate the boiler, generator and transformer rooms by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.

8. Separate the hazardous materials / flammable liquid storage room by a minimum 2- hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.

9. Provide additional means of egress.

10. Provide fire alarm system in accordance with NFPA 72.

Mid Term (within 6 Months):

1. Modify stair to discharge directly outside. Or provide 2-hr fire-rated exit passageway leading directly outside (vestibules to separate any storage areas).

Long Term (More than 6 months): NA

The recommendations for Electrical Safety corrective actions are:

Immediate (Within 1 month):

1. Shutdown the power of the transformer and clean the exterior of the transformer at scheduled period. Establish a routine cleaning program to keep neat and clean the transformer and transformer room.

2. Disconnect (shutdown) the transformer from service line and replace the silica gel and establish a routine maintenance program to inspect and maintain related issues of transformer and fill the Breather oil cup with transformer oil up to the required level as instructed by the manufacturer. Consult with transformer servicing company before performing the task. Establish a routine maintenance & inspection program for transformer as well as all other electrical equipment to ensure any future repetition of the occurrence.

3. Disconnect (shutdown) the transformer from service line and refill transformer conservator with transformer oil.

4. Provide an acid proof battery stand for holding the batteries and ensure sufficient space around it for easy maintenance and periodic inspection and the battery terminal poles must be covered with acid proof insulation.

5. Provide phase separators between terminals of MCCB made of non-combustible insulating material preferably the separator provided by manufacturer.

6. Cable terminations must be done with appropriate current rated thimbles. Check the loose connections and replace the burnt thimble with adequately tighten with crimping tool after taking shut down of power.

Short Term (Within 3 Months):

1. Cables passing through permanent walls must be protected in steel pipes. Seal all the penetrations using non appropriate fire rated material and ensure the cable insulation does not get damaged during sealing work.

2. Disconnect the power source of the cable laid into channel and clean dust and debris of all interior components. Establish a periodic cleaning program and maintain records of the activities. Provide cover made of non-combustible material on the channel for preventing ingress of dust and debris in future.

3. Mid span jointing of cable should be avoided and cable should be joint by straight through jointing kits. Branching/tapping should be done only from bus bar.

4. Cables must be connected to terminals by soldered/welded lugs according to the size of the respective cables. Proper crimping tools must be used to punch the socket.

Mid Term (Within 6 months):

1. Transformer must be mounted on a platform above the finished floor level. Provide light inside transformer room.

2. Cables terminating at transformer terminals (both HT and LT) must be supported on cable riser/ladder.

3. HT cable dropping from 11kV pole must be protected in steel pipe of required size at least 2m from the ground level to protect from physical damage by moving objects.

4. Large exhaust fans must be connected through control device such that it will not restart automatically when power is restored. It may be controlled by Direct-On-Line (DOL) switch.

5. Install lighting arrestor for lighting protection. Separate earthing should be provided for lighting arrestor.

Long Term (More than 6 months):

1. Barrier wall should be provided to separate transformer from other utilities.