

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: SNOWTEX OUTERWEAR LTD
Address of the Factory	: B 65/3, Lakuriapara, Dhulivita, Dhamrai, Dhaka Aricha Highway Road, Dhaka 1350
Dhaka Present Status of the Factory	: Under Operation
Structural assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	: 27 August, 2014
Fire & Electrical assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	: 18 August, 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	: R.C Beam and column frame with a 2-way beam slab
iii.	Floor System	: Beam slab
iv.	Floor Area	: The factory has total floor area of 1734230Sq.ft.
v.	No. of Stories	: 2 storied
vi.	Construction Year	: 2013
vii.	Foundation Type	: Piled foundation
viii.	Design Drawings	: Available
ix.	Soil investigation Report	: Available
x.	Construction Materials	: Unavailable
xi.	Generator	: Out Building

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):

1. Building Engineer to analyze and check the structural system under lateral wind and seismic loads to verify the building's adequacy.
2. The piled foundations should be careful reviewed to determine the existing pile capacity based on a 13.7m pile length.
3. Building Engineer to review and check the structural capacity of the columns.
4. Verify the actual concrete and rebar strength of the existing columns.
5. Reduce the live load for all floors to 2.0kPa (40psf) until the review is complete.
6. Produce loading plans for each floor of the building as per design live load based on the findings from items 2 & 3.
7. Building Engineer to review and check the stability structure of the building under wind load and the steel to masonry connections.
8. Building Engineer to inspect all "Temporary Buildings" to establish present condition.
9. Demolish or repair "Temporary Buildings" as necessary.

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10. One section of the drawing needs to be revised to show 6 storeys throughout to avoid any misunderstanding in the construction process.

Long Term (Within 6 Months):

1. Based on the analysis result, consider strengthening works or other required actions.
2. Based on the analysis result, consider any implications on floor loading, or number of floors.
3. Once the re-analysis is complete re-confirm the actual allowable floor loadings.
4. A bracing system needs to be provided and the connections need to repair properly.
5. Steel – masonry connections to be strengthened accordingly.
6. A waterproof membrane needs to be applied to the roof of the building at the end of construction, or an upper level if construction is to stop for more than one year.

The recommendations for Fire Safety corrective actions are:

Immediate (Within 1 month):

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

Short Term (Within 3 Months):

1. Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.
2. 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.
3. Provide handrails on at least one side of exit stair.
4. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
5. Inspect, test and maintain the automatic sprinkler system, and keep written records onsite, in accordance with NFPA 25.
6. Inspect, test and maintain the emergency lighting system in accordance with The ACCORD standard. Keep written records on-site.

Mid Term (within 6 Months): NA

Long Term (More than 6 months): NA

The recommendations for Electrical Safety corrective actions are:

Immediate (Within 1 month):

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1. Provide cable ladder made of noncombustible material to support the HT cable. Excess length of cable may be supported by providing cable tray or by constructing the cable trench with cover.
2. Install baseplate/top cover of panel to fix the cable on it with glands of required size. Cables at short distance may be protected in rigid/PVC flexible pipe properly supported.
3. Earth pit must be covered by rigid metallic plate to prevent accident/unintentional step over. Earthing strip connected to electrode must be rigidly fixed with nuts and bolts and properly laid underground.
4. Cables on the ladder must be properly arranged and latched. Ladder must be installed throughout the cable length.
5. Motor must be fixed firmly on the concrete floor (base slab may be built).
6. Use Ladder cable tray with cover or rigid conduit to protect the cable. It will prevent from any mechanical damage.

Short Term (Within 3 Months):

1. The factory must have as-built electrical SLD with electrical wiring layout designs and drawings. Any changes in load, protection system, conductors, Generation and supply system must be reflected in the as-built SLD and drawings.
2. Thermo graphic scanning of the entire electrical system must be performed on tri-annual basis and recorded.
3. Insulation resistant test of all the cables must be performed once every 5 year cycle and recorded.
4. Electrical safety training and awareness program for the electrical personal and workers must be initiated and recorded.

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA