

## Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory : Uniform Textile Ltd.  
Address of the Factory : CB-288, Kachukhet, Tamanna Complex, Cantonment, Dhaka  
Present Status of the Factory : Under Operation  
Structural Assessment Conducted by : BUET  
Date of Structural Inspection : 10<sup>th</sup> November 2014

### **BASIC INFORMATION:**

The factory building is a 6 storied RC structure and has reinforced concrete beam-column framing system structure. The following information was noted:

- i. Building Usage Type : Garment factory
- ii. Structural System : Beam-Column frame system
- iii. Floor System : Edge supported RC slabs (Thickness 5" approximately)
- iv. Floor Area : Approximately 10,000 sq.ft per floor
- v. No. of Stories : 6 stories
- vi. Construction Year : 1994, by Building Owner (as per verbal information)
- vii. Foundation Type : Shallow footing (As per previous drawing)
- viii. Design Drawings : The detail structural drawing is not available. (The previous drawing differs with actual construction)
- ix. Soil Boring Report : Available dated January, 2000.
- x. Construction Materials : Reinforced Concrete
- xi. Generator : At the Ground Floor

### **RECOMMENDATIONS FOR CORRECTIVE ACTION:**

The recommendations of corrective action for both Structural and Fire & Electrical Safety comprises in Short Term, Mid Term and Long Term basis.

The recommendations for **Structural Safety** corrective action are:

Short Term (Immediate) : Spalling of concrete from many places of 6th Floor (Roof) slab (specially in the western side open roof area) was observed. Rusts in slab reinforcements in this area are clearly visible. The users/owners should be vigilant about spalling of concrete in this area and take necessary actions in consultation with competent engineer immediately.

Mid Term (6-weeks) : The factory owner has been instructed to prepare and submit a load plan for vetting. There is one storied tin shed structure having about 50'x40' plan area with brick walls all around. The entrance door was locked. It is being used as storage of Udayan Garments as per verbal information. The roof should be properly reconstructed and should be kept vacant.

Long Term (6-months) : Detail Engineering Assessment (DEA) has to be completed. in six months. Proper As-built drawing should be prepared.

The recommendations for **Fire & Electrical Safety** corrective action are:

Name of the Factory : Uniform Textile Ltd.  
Fire & Electrical assessment conducted by : BUET  
Date of Fire & Electrical Inspection : 15<sup>th</sup> November 2014

### ***(A): Recommendations for Fire Safety corrective actions:***

Fire Safety Issues	
Immediate <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i>	N/A

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<p>Short Term <i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</i></p>	<p>Remove obstructions from all escape routes, aisles and passageways.</p> <p>Maintain minimum effective width of corridors, passageways and aisles.</p> <p>Remove all combustible materials from transformer, substation, boiler and generator room, if exists.</p> <p>Make sure that portable extinguishers are easily accessible, monitored and maintained at regular interval as per the Guidelines.</p> <p>Provide proper directional signs and exit signs in Bangla and English as per the Guidelines.</p>
<p>Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Prepare drawings to ensure adequate horizontal and vertical fire-rated separation inside one floor and between different floors, e.g. separation with stairways, storage, assembly areas, basement, lift lobby, offices, and work areas as per the Guidelines.</p> <p>Prepare plans to ensure all exit access doors are side- swinging type and open to the direction of traffic flow.</p> <p>Prepare drawings to relocate and distribute the exits as remote as possible with regular interval.</p> <p>Show methods to demonstrate how exit doors are to satisfy the occupancy load according to the Guideline</p> <p>Produce drawings to demonstrate how stairways are to be made of adequate dimensions and appropriate specifications and to be converted into fire-rated enclosures equipped with fire-rated doors.</p> <p>Also show methods to ensure proper separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per the Guidelines.</p> <p>Provide design to install standard standpipe, hose and fire pump system.</p> <p>Provide design to install proper detection and alarm system. Establish command station as per the Guidelines.</p>
<p>Long Term <i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<p>Ensure adequate horizontal and vertical fire-rated separation inside one floor and between different floors, e.g. separation with stairways, storage, assembly areas, basement, lift lobby, offices, and work areas.</p> <p>Ensure all exit access doors are side-swinging type and open to the direction of traffic flow.</p> <p>Relocate and distribute the exits as remote as possible with regular interval.</p> <p>Ensure proper separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per the Guidelines.</p> <p>Install standard standpipe, hose and fire pump system. Install proper detection and alarm system.</p> <p>Provide fire rated enclosure, install self-closing fire rated door as per guidelines.</p>

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**(B): Recommendations for Electrical Safety corrective actions:**

Electrical Safety Issues	
<p>Immediate <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	N/A
<p>Short Term <i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</i></p>	<p>Provide instructions for first aid and artificial respiration from exposure to electrical shock. Provide rubber mat in front of the panel.</p> <p>Ensure well-dressed cabling with lugs and remove loose cabling.</p> <p>Ensure earthing of panel door with fitted condition.</p> <p>Provide distribution board as per guideline and put identification mark on distribution panel.</p> <p>Remove burn/broken/loose MCB/MCCB box/socket.</p>
<p>Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Provide separate service shafts for electrical cables.</p> <p>Provide new Emergency Lighting system.</p> <p>Provide appropriate Lightening Protection System as per guidelines.</p>
<p>Long Term <i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	N/A