

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

Name of the Factory	: T-Design Ltd.
Address of the Factory	: CS-06, RS-124, Jirabo Bazar, Ashulia, Savar
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 25 <sup>th</sup> December 2013

### **BASIC INFORMATION:**

The factory building is a mixed occupancy six storied RC frame building. The building is on individual shallow foundation. The following information was noted:

i.	Building Usage Type	: Garment Factory
ii.	Structural System	: Beam-Column Frame
iii.	Floor System	: Edge supported slab
iv.	Floor Area	: Approximately 24040 sft per floor
v.	No. of Stories	: 6 storied
vi.	Construction Year	: Upto 2 <sup>nd</sup> story in 2002-03 and upper stories in 2011
vii.	Foundation Type	: individual shallow foundation (as per drawing)
viii.	Design Drawings	: Available but not complete
ix.	Soil Investigation Report	: Available – conducted by B.D. Soil & Foundation Engineers in December 1999
x.	Construction Materials	: RCC using Brick Chips as Coarse Aggregate
xi.	Generator	: In 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) : Scanning must be done in typical columns to determine column reinforcements. As-built structural drawing should be prepared using scanning results. Intensity of load does not exceed 40 psf (2 kN/m<sup>2</sup>) at any location of the building.

Mid Term (6-weeks) : None

Long Term (6-months) : None

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

Name of the Factory	: T Design Ltd.
Fire & Electrical assessment conducted by	: BUET
Date of Fire & Electrical Inspection	: 25 <sup>th</sup> December 2013

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

Immediate (the factory should not continue to be occupied until these non-conformities have been rectified):	N/A
Short Term (Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)	Remove all temporary obstructions from all escape routes, aisles and passageways. Ensure minimum width of corridors, passageways and aisles. Ensure adequate numbers of fire drills. Ensure easy access to portable extinguishers and monitor and maintain the same at required interval as per guidelines. Provide exit sign in Bangla and English as per guidelines.

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<p>Mid Term (The remedial works indicated must be carried out within a period of 6 weeks)</p>	<p>Produce proper drawing and plans to create horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage and assembly areas, offices, work areas. Also design to ensure proper separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per guidelines.</p> <p>Remove all collapsible gates/roller shutters. Produce design 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 side swinging doors of required dimensions opening in the direction of travel at each floor.</p> <p>Provide design to install proper detection and alarm system.</p>
<p>Long Term (The remedial works indicated must be carried out within a period of 6 months)</p>	<p>Install horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage and assembly areas, offices, work areas.</p> <p>Ensure proper fire separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per approved design.</p> <p>Install fire rated enclosure and doors of appropriate dimensions at exit to the stairs to prevent smoke and fire propagation as per approved design.</p> <p>Install proper detection and alarm system.</p> <p>Provide fire rated enclosure, install self closing fire rated door as per guidelines.</p>

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

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