

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

Name of the Factory	: Advance Design
Address of the Factory	: “Nurul Shopping Complex” 5 Sujat Nagar (7 <sup>th</sup> & 8 <sup>th</sup> floor), Section-12, Pallabi, Mirpur, Dhaka
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 29 <sup>th</sup> September 2014

### **BASIC INFORMATION:**

The factory building is 9 storied (plus one basement) RC beam column frame structure named Nurul Shopping Complex at 5 Sujat Nagar, Pallabi, Mirpur-12, Dhaka-1216. The following information was noted:

i.	Building Usage Type	: Garment factory building, shops at ground floor level
ii.	Structural System	: RC Frame Building
iii.	Floor System	: Edge supported RCC slabs, thickness= 5” (assumed)
iv.	Floor Area	: Approximately 790 sq. m (3850 sft) per floor
v.	No. of Stories	: 9-Stories
vi.	Construction Year	: Approximately 1995
vii.	Foundation Type	: Isolated individual footing (as reported)
viii.	Design Drawings	: Not provided
ix.	Soil Investigation Report	: Not provided
x.	Construction Materials	: Reinforced Concrete, Stone Chips (verified)
xi.	Generator	: Outside of the building

### **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)	: None
Mid Term (6-weeks)	: None
Long Term (6-months)	: The factory owner has been instructed to prepare and submit a load plan for vetting. Soil exploration report in order to check foundation adequacy by a qualified engineer. A thorough structural adequacy check will also be needed in future for vertical extension of the building.

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

Name of the Factory	: Advance Design
Fire & Electrical assessment conducted by	: BUET
Date of Fire & Electrical Inspection	: 18 <sup>th</sup> November 2014

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

Fire Safety Issues	
Immediate (the factory should not continue to be occupied until these non-conformities have been rectified):	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 all temporary obstructions from all escape routes, aisles and passageways.</p> <p>Ensure minimum width of corridors, passageways and aisles.</p> <p>Ensure adequate numbers of fire drills.</p> <p>Ensure easy access to portable extinguishers and monitor and maintain the same at required interval as per guidelines.</p> <p>Provide proper directional sign and exit sign in Bangla and English as per 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, 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>Produce drawings to demonstrate how stairways are to be made of adequate dimensions and appropriate specifications and to be converted into continuous fire-rated enclosures equipped with fire-rated doors.</p> <p>Also show methods to ensure proper separation of high risk areas (e.g. boiler 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.</p> <p>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>Install horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage offices, work areas.</p> <p>Ensure proper fire separation of high risk areas (e.g., boiler 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 standard standpipe, hose and fire pump system.</p> <p>Install proper detection and alarm system.</p> <p>Ensure all exit access doors are side-swinging type and open to the direction of traffic flow.</p>

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

Electrical Safety Issues	
<p><b>Immediate</b>  <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	N/A
<p><b>Short Term</b>  <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.</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>Remove burnt/broken/loose MCB/MCCB box/socket.</p>
<p><b>Mid Term</b>  <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></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><b>Long Term</b>  <i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	N/A