

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: Root Apparels Ltd.
Address of the Factory	: 901 Razzak Tower, Uttar Khan, Uttara, Dhaka
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 5 th November 2014

BASIC INFORMATION:

The present garment factory is a seven storied commercial building with beam-column frame system. The following information were noted:

- i. Building Usage Type : Primarily as Garments Factory.
- ii. Structural System : RC beam column frame structure
- iii. Floor System : Edge supported RC solid floor slab system on RC beam.
- iv. Floor Area : Approx.5,500 sft/floor (as per approval drawing).
- v. No. of Stories : Seven story (against its design as six story).
- vi. Construction Year : Before 2005
- vii. Foundation Type : Individual footing of different sizes
- viii. Design Drawings : Approval and Design Drawings Available (SUN VIEW FOUNDATION, 36/Kha, Circle-10, Section-6, Mirpur, Dhaka-1216).
- ix. Soil Investigation Report : Available (Modern Khawaja Soil Engineers, East Merul Takpara Road #1, 29 Badda, Dhaka-1212, Feb 1994).
- x. Construction Materials : Reinforced Concrete with brick chips and steel plain rebars 40 Grade (assumed from year of construction).
- xi. Generator : Outside 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) : The factory owner has been instructed to prepare and submit a load plan for vetting.

Mid Term (6-weeks) : A Detail Engineering Assessment (DEA) has to be completed.

Long Term (6-months) : Necessary remediation's after completion of DEA.

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

Name of the Factory : Root Apparels Ltd.

Fire & Electrical assessment conducted by : BUET

Date of Fire & Electrical Inspection : 20th October 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 (Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</p>	<p>Remove obstructions from all escape routes, aisles and passageways.</p> <p>Remove all combustible materials from generator room.</p> <p>Maintain minimum effective width of corridors, passageways and aisles.</p> <p>Make sure that portable extinguishers are 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 (The remedial works indicated must be carried out within a period of 6 weeks)</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, offices, and work areas. Also show methods to ensure proper separation of high risk areas (e.g., generator, boiler rooms) as per the Guidelines.</p> <p>Prepare plan 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 fire-rated enclosures equipped with fire-rated doors</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 (The remedial works indicated must be carried out within a period of 6 months)</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>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>

(B): Recommendations for Electrical Safety corrective actions:

Electrical Safety Issues	
<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>Provide cover on the cable trench and rubber mat in front of the panel.</p> <p>Ensure well-dressed cabling with lugs and remove loose cabling.</p>

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Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i>	Provide separate service ducts for electrical cables. Provide new Emergency Lighting system. Provide appropriate Lightening Protection System as per guidelines.
Long Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i>	N/A