

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: UTTARA FABRICS (PVT) LIMITED
Address of the Factory	: E168, Bowbazar, Chowdhury Bari, Godanail, Siddirganj, Narayanganj.
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: TUV
Date of Structural Inspection	: 12th July, 2015
Fire Assessment Conducted by	: TUV
Date of Fire Inspection	: 12th July, 2015
Electrical Assessment Conducted by	: TUV
Date of Electrical Inspection	: 12th July, 2015
BGMEA Membership No.	: 2811
BKMEA Membership No.	: 66

BASIC INFORMATION:

The assessed factory is a 4-storey RCC factory building with beam column frame structural system. The following information was noted:

i. Building Usage Type	: Garment factory
ii. Structural System	: R.C.C. Beam Column Frame.
iii. Floor System	: Beam Slab.
iv. Floor Area	: Total floor area is 29940 sq. ft. approx.
v. No. of Stories	: 4 storeys.
vi. Construction Year	: 2008
vii. Foundation Type	: Shallow Foundation
viii. Design Drawings	: Available and have approval on 25th September, 2006 from Siddirganj Municipality, Narayanganj for a 5- storey commercial building
ix. Soil Investigation Report	: Available.
x. Construction Materials	: Stone Aggregate.
xi. Generator	: Situated at 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) : None.

Mid Term (6-weeks) : None.

Long Term (6-months) :

- The connections of steel structure and requirement of cross bracing needs to be checked by building engineer. The bracing system is required to ensure the stability of the structure.

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

(A): Recommendations for Fire Safety corrective actions:

<p>Immediate</p> <p><i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	<p>N/A</p>
<p>Short Term</p> <p><i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (1 ~ 2 weeks) and should be a regular activity</i></p>	<ul style="list-style-type: none"> • Provide aisle marking with arrow guiding and exit signage on all Evacuation pathways or provided with overhead signage fixed at ceiling level.
<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<ul style="list-style-type: none"> • Replace all existing exit doors on evacuation routes, exit doors with side hinged type door, which swing outward and in the direction of travel. Swinging of the door should not constrict the width of the corridor / passage below 0.9 meter. • Remove all locking device from all egress door. All exit doors should be open-able from the side they serve without the use of a key. • Provide handrails on both side of each stairway with height of 0.9m measured from the nose of stair to the top of the handrail. • Doors in stair should be outward opening, side-swing, self-closing, non-lockable 1.5 hours fire rated doors in all stair way encloses.(Also require fire rated door at the floor occupied by other tenants) • Prepare proper plan and design for 4 hours fire rated barriers with 2 hours fire rated doors at ground floor generator & boiler room, which located at the adjacent to stair exit-1 (south side). • Produce design and plan for automatic detection system with automatic fire alarm. (Also needs to cover the floors occupied by other tenants). • Provide adequate nos. of smoke detectors to cover the whole factory building. • Prepare proper design and plan for dedicated fire pump with alternate backup power supply. • Prepare proper design and plan for dedicated fire pump with alternate backup power supply. • Prepare plan and design for dedicated water storage tank for firefighting operation as per RMG guideline. • Implement to a single fire safety management system with approvals from all tenants in the factory building.

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<p>Long Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<ul style="list-style-type: none"> • Provide 4 hours fire rated barriers with 2 hours fire rated doors at ground floor generator & boiler room, which located at the adjacent to stair exit-1 (south side). • Install automatic detection system with automatic fire alarm. (Also needs to cover the floors occupied by other tenants). • Install dedicated fire pump with alternate backup power supply. • Stand pipe supplying first aid hose should have minimum pressure of 200 KPa. • Provide dedicated storage tank for firefighting operation.
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(B): Recommendations for Electrical Safety corrective actions:

<p>Immediate</p> <p><i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	<p>None.</p>
<p>Short Term</p> <p><i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity</i></p>	<p>None.</p>
<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<ul style="list-style-type: none"> • Install over heat detection in the generator room. • Avoid bunch of cable at MCCB use individual circuit and over current device for every incoming and outgoing circuit at the distribution boards. • Provide proper separate earthing/grounding to generator. Ensure that generator body frame to have two separate and distinct connections to the earth / ground.
<p>Long Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<ul style="list-style-type: none"> • Provide 4 hour fire rated walls & 1.5 hour fire rated door the generator room on ground level. • Modify Area of generator room to meet requirements of Table 4.4, RMG Guideline; the area should be 32m², or relocate the generator room. • Provide and maintain proper clearance in all sides of generator for ease of maintenance.