Shamser Knit Fashion Ltd.

Sreepur, Ganakbari, Ashulia, Savar, Dhaka.
(23°57’36“ N, 90°16’27“ E)
11 February 2015

ACCORD on Fire and Building Safety in Bangladesh

ARUP

Observations

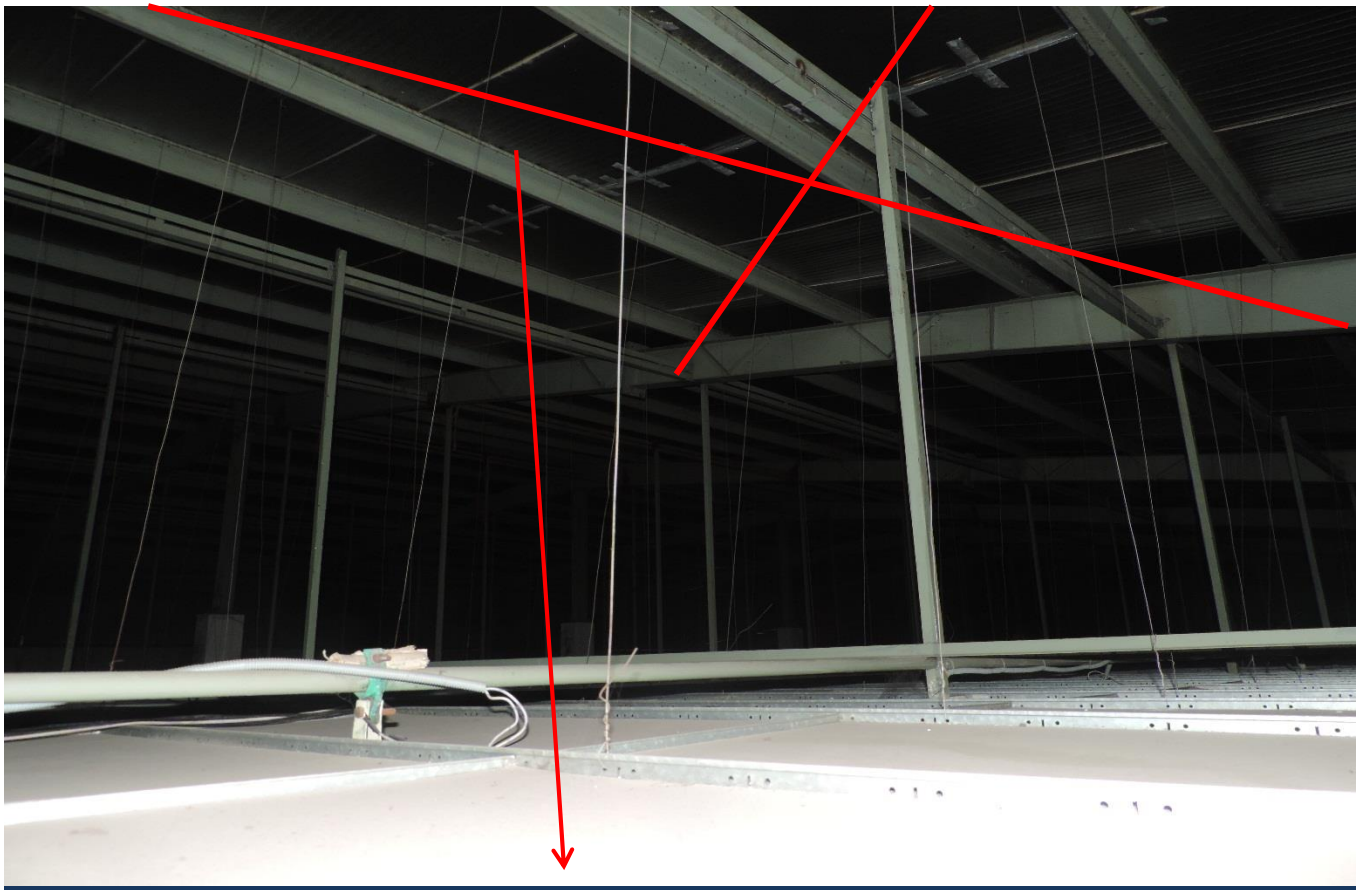
Building 1 (Sewing & Finishing)

Lateral bracing system is reliant on the external brick walls

Lateral bracing system is observed

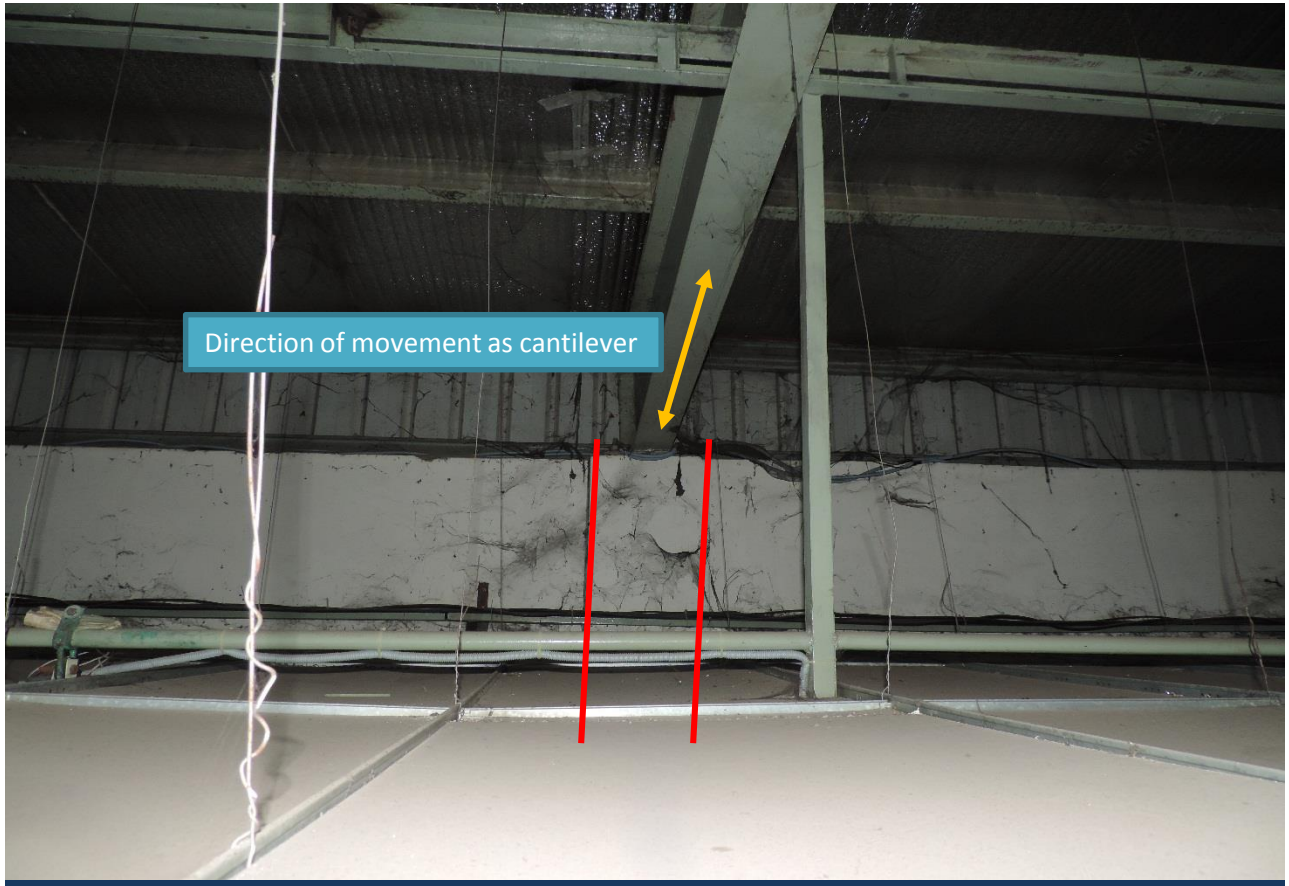
Observations

Roof steel structure appears light and lacks horizontal bracing



Light metal roof with lack horizontal bracing

RC columns supporting roof appear to be acting as cantilevers



RC columns are acting as cantilevers

Observations

Building 2 (Cutting)

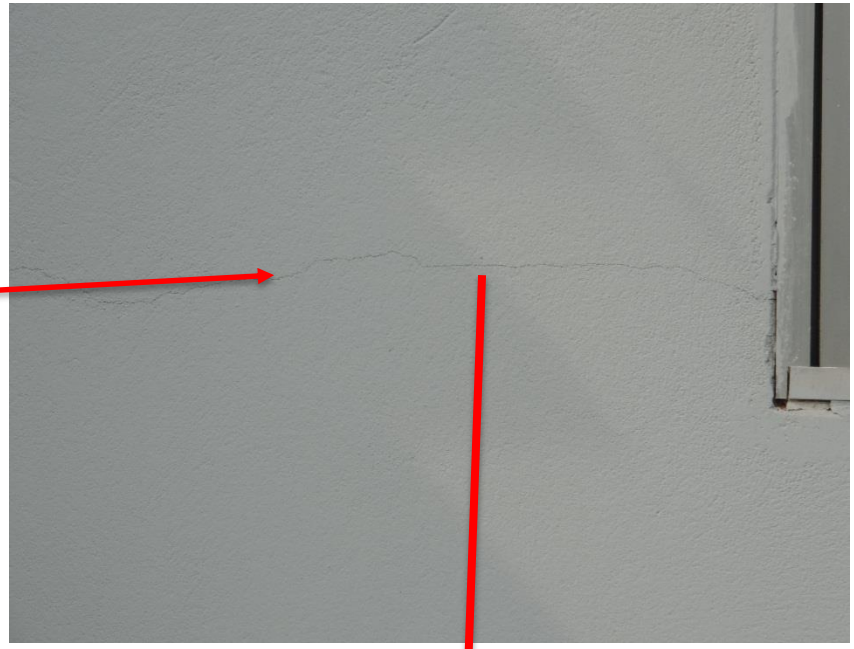
Steel frame appears not to act as a portal frame

Observations

Lack of roof bracing

No bracing was observed in roof

Lateral bracing system appear to be reliant on external walls which show cracking



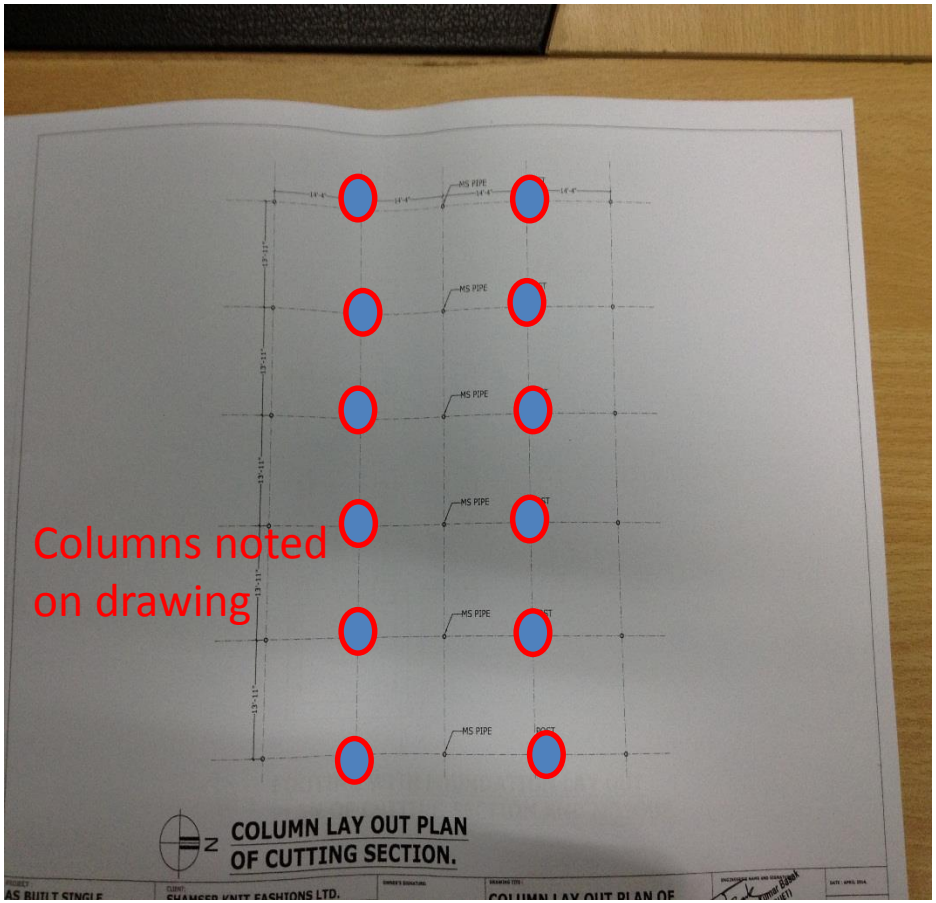
Horizontal crack is observed on the side wall

Cracks observed on the wall

Wall panels have no head restraint

No head restraint on wall

Observed differences between drawings and As-Built structure



Structural drawing of column layout plan

No column was found during inspection

Columns shown in the structural drawing that do not exist on site

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Building 3 (Fabric warehouse)

Lateral bracing system for structure would appear to be currently reliant on the external brick walls

Lateral forces currently resisted by external walls

Cracking in external gable wall

Crack is observed in external wall

Lack of roof lateral bracing including head restraint to top of internal columns

Lack of lateral bracing and no head restraint

Cracking in floor

Cracking in floor slab

Building 4 (Garage, Office, Child Care & Doctor's room)

Non-engineered roof structure

Non engineered roof structure to garage

Building 5 (Dining)

Non-engineered roof structure with poor steel to steel connections observed

Non engineered roof structure to Dining and generator building 5

Lateral bracing system reliant on external wall and cantilever columns.

Lateral bracing system reliant on external walls

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Problems Observed

Building 1

ITEM 1: Lateral bracing system is reliant on the external brick walls and the RC columns cantilevering.

ITEM 2: Roof steel structure appears light and lacks horizontal bracing

ITEM 3: Observed differences between drawings and As Built structure

Building 2

ITEM 1: Steel frame appears not to act as a portal frame

ITEM 2 The lateral bracing system appear to be reliant on external walls which show cracking. No lateral roof bracing observed

ITEM 3: Wall panels have no head restraint.

ITEM 4: Structural drawings is not consistent with the as-built structure

Building 3

ITEM 1: Lateral bracing system for structure would appear to be currently reliant on the external brick walls. There is also lack of bracing at roof level particularly at the head of the columns

ITEM 2: Cracking in external gable wall

ITEM 3: Cracking in floor slab

Building 4

ITEM 1: Non- engineered roof structure

Building 5

ITEM 1: Non- engineered roof structure with poor steel to steel connections observed

ITEM 2: Lateral bracing system reliant on external wall and cantilever columns.

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Building 1 Lateral bracing system is reliant on the external brick walls and the RC columns cantilevering	The Engineer to carry out a review of the existing building structure and its lateral support system in particular the brick walls and columns to resist the lateral load.	**6-weeks**
2	Building 1 Lateral bracing system is reliant on the external brick walls and the RC columns cantilevering	Carry out any remedial actions from review	**6-months**
3	Building 1 Roof steel structure appears light and lacks horizontal bracing	The Engineer to carry out a review of the roof structure, in particular the lateral stability of the portal frame	**6-weeks**
4	Building 1 Roof steel structure appears light and lacks horizontal bracing	Carry out any remedial actions from the above review	**6-months**
5	Building 1 Observed differences between drawings and As Built structure	The engineer to update the structural drawings to reflect the as build structure	**6-months**

Item No.	Observation	Recommended Action Plan	Recommended Timeline
6	Building 2 Steel frame appears not to act as a portal frame	The engineer to review the structural system of the frame. In particular the circular column connections to the beams. The frame appears to be non-engineered.	**6-weeks**
7	Building 2 Steel frame appears not to act as a portal frame	Carry out any remedial actions form the engineers review above.	**6-months**
8	Building 2 The lateral bracing system appear to be reliant on external walls which show cracking. No lateral roof bracing observed	The engineer to review the structural system of the frame. In particular the circular column connections to the beams. The frame appears to be non-engineered as does the roof structure.	**6-weeks**
9	Building 2 The lateral bracing system appear to be reliant on external walls which show cracking. No lateral roof bracing observed	Carry out any remedial actions form the engineers review above.	**6-months**
10	Building 2 Wall panels have no head restraint	Engineer to review the wall panels and their ability to span between columns	**6-weeks**
11	Building 2 Wall panels have no head restraint	Carry out any remedial actions form the engineers review above.	**6-months**
12	Building 2 Structural drawings is not consistent with the as-built structure	The engineer to update the drawings to reflect the as builts structure.	**6-months**

Item No.	Observation	Recommended Action Plan	Recommended Timeline
13	Building 3: Lateral bracing system for structure would appear to be currently reliant on the external brick walls. There is also lack of bracing at roof level particularly at the head of the columns	Engineer to review the structural system of the building, in particular to review the buildings ability to resist horizontal loading.	**6-weeks**
14	Building 3: Lateral bracing system for structure would appear to be currently reliant on the external brick walls. There is also lack of bracing at roof level particularly at the head of the columns	Carry out remedial works as directed by the engineering review	**6-months**
15	Building 3: Cracking in external gable wall	Engineer to review the cracking in the gable walls.	**6-weeks**
16	Building 3: Cracking in external gable wall	Carry out remedial works as directed by the engineering review	**6-months**
17	Building 3: Cracking in floor slab	Engineer to review the cracking in the floor slab. Possible settlement cracks.	**6-weeks**
18	Building 3: Cracking in floor slab	Carry out remedial works as directed by the engineering review	**6-months**

Item No.	Observation	Recommended Action Plan	Recommended Timeline
19	Building 4: Non- engineered roof structure	Engineer to review the roof structure.	**6-weeks**
20	Building 4: Non- engineered roof structure	Carry out remedial works as directed by the engineering review	**6-months**
21	Building 5: Non- engineered roof structure with poor steel to steel connections observed	The engineer to review the roof structure.	**6-weeks**
22	Building 5: Non- engineered roof structure with poor steel to steel connections observed	Carry out remedial works as directed by the engineering review	**6-months**
23	Building 5: Lateral bracing system reliant on external wall and cantilever columns	The engineer to review how the structure resist lateral load	**6-weeks**
24	Building 5: Lateral bracing system reliant on external wall and cantilever columns	Carry out remedial works as directed by the engineering review	**6-months**