

# Jointex Fashion Wears Ltd. (Unit-3)

02, Hossain plaza, Matbar bari, Tanga bari, Ashulia, Savar, Dhaka  
(23.906263, 90.322926)

13<sup>th</sup> September 2017





# Observations



# Column to be stressed above normal design limits

3 **Observations: Production Building**

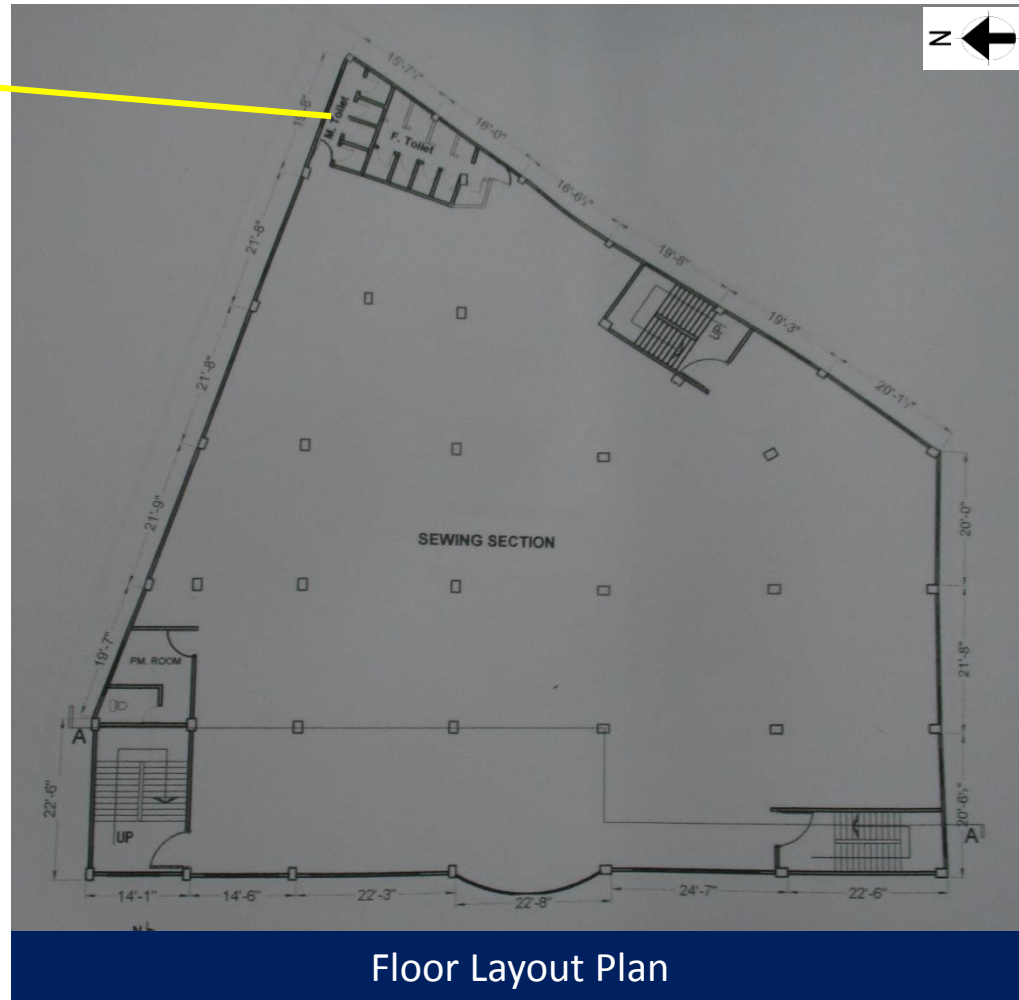


Toilet partition walls



Toilet build up in several floor.  
Max 200 mm

Cursory calculation indicates that Columns appears to be stressed above normal design limits.



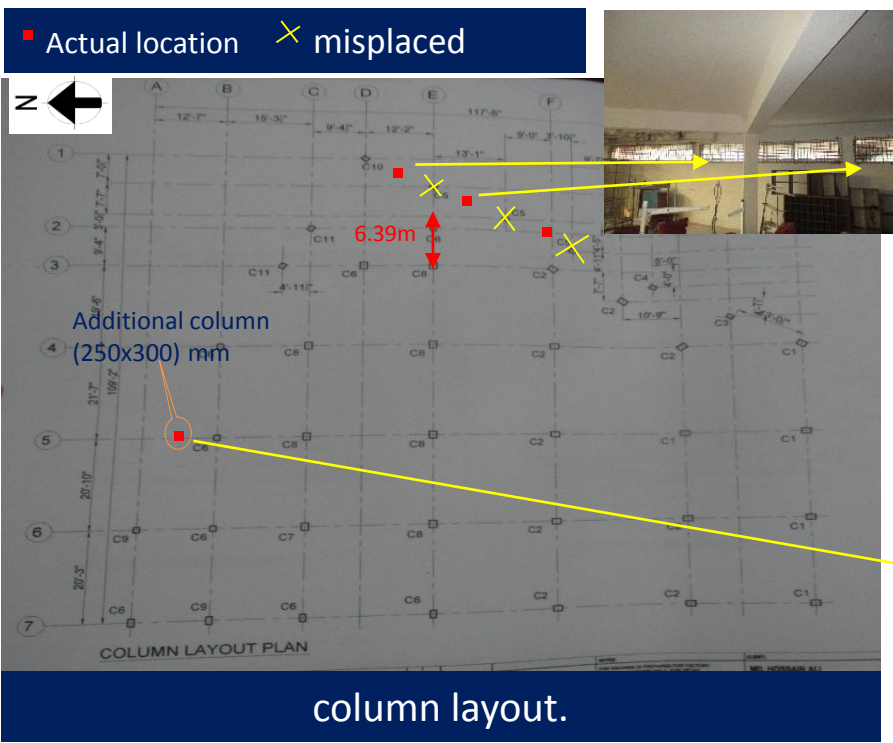
Floor Layout Plan

## Observations: Production Building



# Discrepancies between provided drawings and on site condition

**Observations: Production Building**



column layout.

Column size and nos. of rebar & rebars dia are not fully match with column schedule. Building engineer is required confirm the dia, size & nos. of rebar on each column.

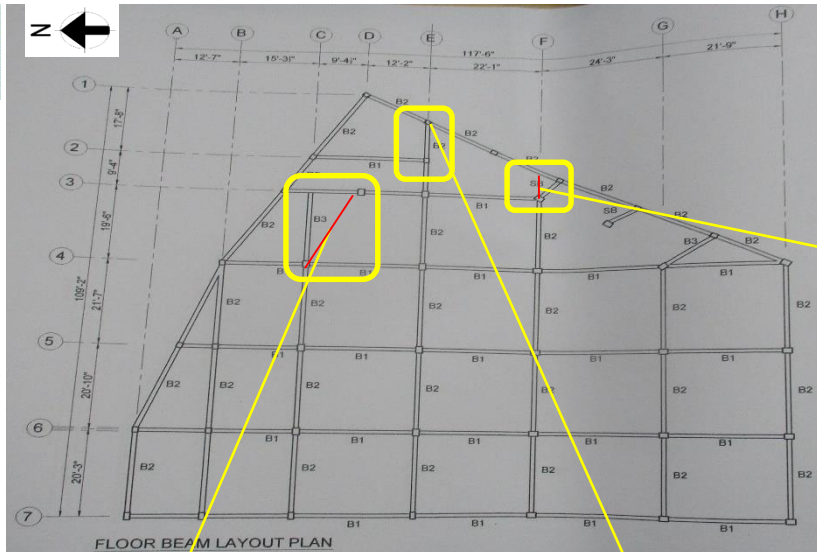


Grid dimension in between grid- 2 & 3 and position of columns at East didn't match with column layout. Also an additional column was found on grid 5. No foundation system is shown on drawings for the additional column. So the load path and foundation system of the column is required to investigate by factory engineer. Mismatches are shown in red on drawings.

COL. TYPE	COLUMN SIZE	GF TO GF	GF TO ROOF
C1	18x23	8-20 20mm Ø + 4-16 mm Ø	10' x 20'
C2	18x23	10-20mm Ø + 4-16 mm Ø	10-20mm Ø + 4-16 mm Ø
C3	15' x 18'	8-20mm Ø + 4-16 mm Ø	10' x 15'
C4	15' x 18'	6-16mm Ø + 4-20mm Ø	10' x 15'
C5	15' x 15'	06-16mm Ø	06-16mm Ø
C6	10' x 20'	8-20mm Ø + 2-16mm Ø	10' x 20'
C7	10' x 20'	10-20mm Ø + 2-16 mm Ø	10-20mm Ø + 2-16 mm Ø
C8	10' x 20'	12-20mm Ø	10' x 20'
C9	10' x 20'	6-20mm Ø + 4-16mm Ø	10' x 20'
C10	10' x 12'	6-16mm Ø + 4-20mm Ø	10' x 12'
C11	10' x 18'	6-16mm Ø + 4-20mm Ø	10' x 18'

COLUMN SCHEDULE

Column Schedule

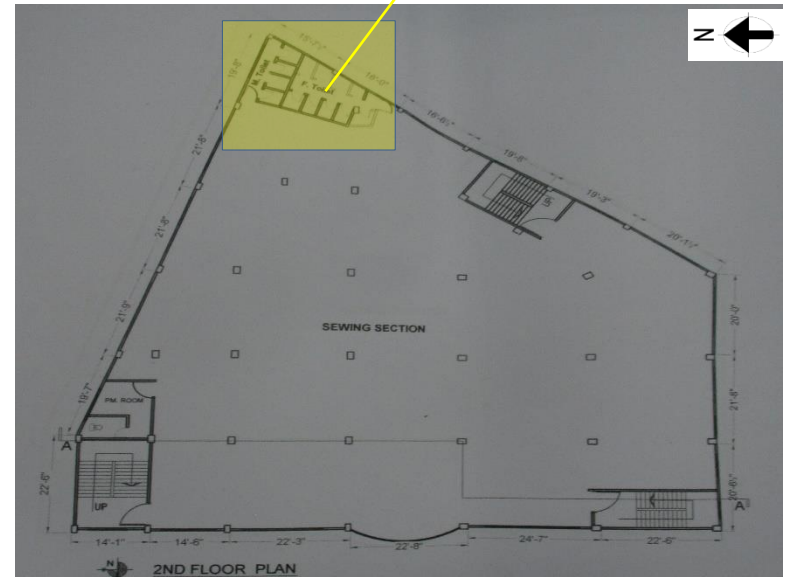


Beam Layout

Architectural drawings were not updated as per site condition. Partition walls of toilet block at North-east corner did not match with layout plan.



Slab details were not provided in structural drawings. Beam layouts were not match in some floors. Mismatches are shown in red on layout.



Floor Layout Plan

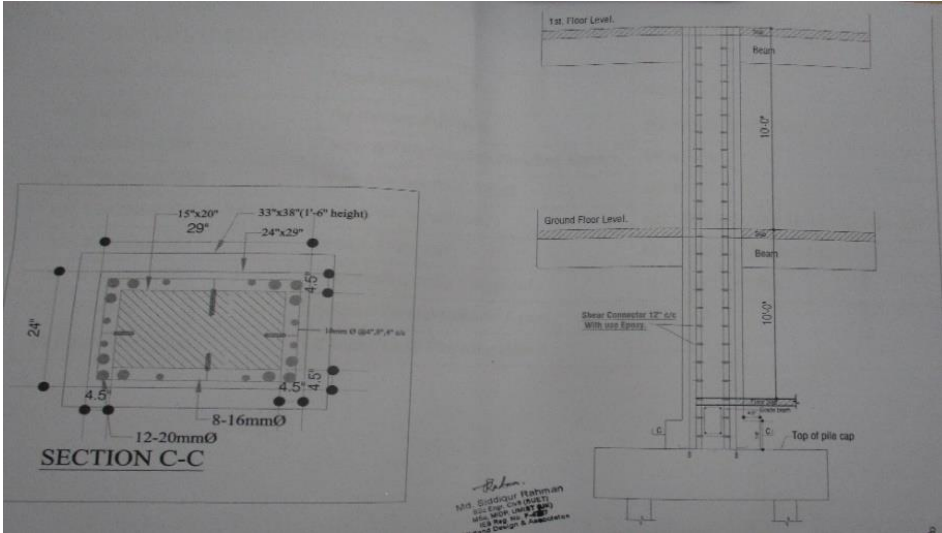
## Observations: Production Building



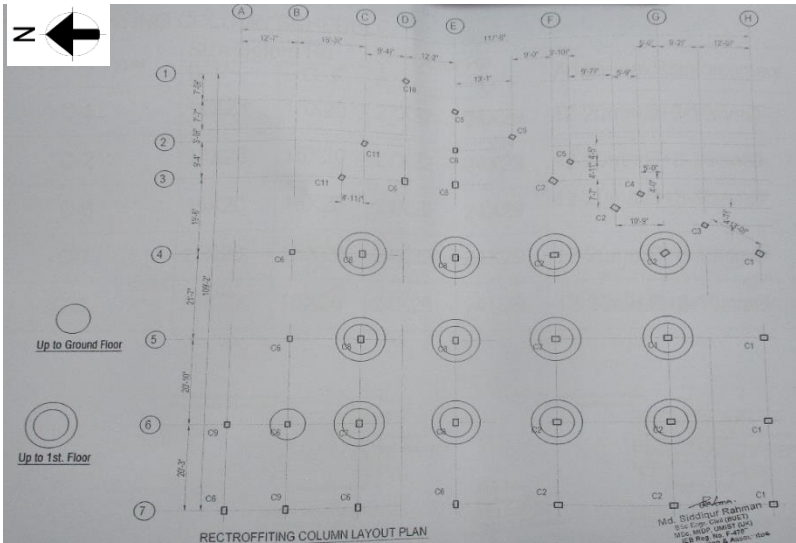
# Detail Engineering Assessment Report & Strengthening works need to be verified



According to the provided DEA report, few columns and foundations are needed to be retrofitted. Factory has already carried out the remedial works. However few columns have found stressed above normal design limits. So DEA report is required to review by ACCORD.



No material strength specification were mentioned in retrofitting scheme. No material test report was available for retrofitting work.



Retrofitting column schedule

CONCRETE LABORATORY

TEST REPORT NO. RL/2017/1

TEST: COMPRESSIVE STRENGTH (CUBES)

TEST NO.	SAMPLE	AGE (DAYS)	TESTED	TEST RESULT (MPa)	TEST RESULT (N/mm <sup>2</sup> )
1	C1	28	10/10/17	24.5	3500
2	C2	28	10/10/17	23.5	3375
3	C3	28	10/10/17	24.0	3450
4	C4	28	10/10/17	23.0	3300
5	C5	28	10/10/17	24.5	3500
6	C6	28	10/10/17	23.5	3375
7	C7	28	10/10/17	24.0	3450
8	C8	28	10/10/17	23.0	3300
9	C9	28	10/10/17	24.5	3500
10	C10	28	10/10/17	23.5	3375
11	C11	28	10/10/17	24.0	3450



6 nos. of footings and 13 nos. of columns have been retrofitted.



# Protect reinforcement from corrosion



All exposed reinforcement must have adequate protection from the elements. Currently the exposed reinforcement is prone to corrosion.



**No water proofing at roof**



Water proofing material hasn't been applied yet. We were informed by the factory management that a screed finish with slopes and proper drainage will be added.



# Cracks found on brick wall

**Observation : Production Building**



Diagonal cracks found on brick wall at North stair. Factory engineer is required to find the cause of cracking and suggest proper remediation procedure.



# Unsupported masonry wall above door opening



The masonry wall above door opening is not supported at basement floor. There is a probability of falling wall due to unsupported wall. Factory engineer is require to provide support the wall with proper load transfer system.



# Lack of documents for Utility Structures



Structural and architectural drawings were not available for all utility structures.



Utility Shed (Generator & Sub-station)



Utility Building (Boiler)



# Apparently non-engineered connection (Utility Shed)



Apparently non-engineered shed. Poor connection between support and truss. Building engineer to check the stability of the lightweight steel roofs against lateral loading.



Poor connection



No bracing system



Utility shed (Generator & Sub station)



# Problems Observed

## Factory Building

- Item 1: Column to be stressed above normal design limits.
- Item 2: Discrepancies between drawings and on site condition.
- Item 3: Detail Engineering Assessment Report & Strengthening works need to be verified.
- Item 4: No water proofing at roof.
- Item 5: Protect reinforcement from corrosion.
- Item 6: Cracks found on brick wall.
- Item 7: Unsupported masonry wall above door opening.

## Utility Structures

- Item 8: No documents for utility structures.
- Item 9: Apparently non-engineered shed (generator & sub-station).



Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Column to be stressed above normal design limits	Factory Engineer to review design, loads and columns stresses	6-weeks
2	Column to be stressed above normal design limits	Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity.	6-weeks
3	Column to be stressed above normal design limits	Make any structural alterations as advised by Building Engineer	6-months
4	Column to be stressed above normal design limits	Continue to implement loading plan.	6-months
5	Discrepancies between provided drawings and on site condition	Building Engineer is required to investigate the foundation system of the additional columns. Also load path of the additional columns are required to verify.	6-weeks
6	Discrepancies between provided drawings and on site condition	Engage an Engineer to update an “as constructed” drawings which reflect the actual site dimensions with complete structural & architectural information.	6-weeks
7	Detail Engineering Assessment Report & Strengthening works need to be verified	Complete the review of Detail Engineering Assessment with Accord.	6-weeks
8	Detail Engineering Assessment Report & Strengthening works need to be verified	Verify the concrete strength used in retrofitting works	6-weeks
9	Detail Engineering Assessment Report & Strengthening works need to be verified	Complete remedial works arising from detail engineering assessment after reviewed by Accord.	6-months



Item No.	Observation	Recommended Action Plan	Recommended Timeline
10	No water proofing at roof	Waterproofing on the roof slab is to be applied. Moreover the roof slab drainage system should be investigated and improved	6-weeks
11	Protect reinforcement from corrosion	All exposed reinforcement is required to protect from corrosion which may cause degradation of the concrete	6-weeks
12	Cracks found on brick wall	Engage Building Engineer to investigate the cause of cracking in brickwork.	6-weeks
13	Cracks found on brick wall	Carry out repairs as directed by Building Engineer.	6-weeks
14	Unsupported masonry wall above door opening	Factory engineer to investigate the door opening under unsupported masonry wall and install lintel to support the wall	Immediate - Now
15	Lack of documents for utility structures	Prepare as-built drawings for utility structures	6-weeks
16	Apparently non-engineered shed (generator & sub-station)	Building engineer to check the capacity of the lightweight steel roof against lateral loading.	6-weeks
17	Apparently non-engineered shed (generator & sub-station)	Carry out remedial works resulting from engineering assessment if necessary.	6-months