

Aman Sweaters Ltd.

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Observations Made

Building 1 (5 storey extension) Soils report identifies poor soil

Building 1 (5 storey extension)

Column reinforcement projecting from roof



Overflow from water tank is uncontrolled and lands on top of reinforcement projecting from column forming stair enclosure. If not addressed this will lead to corrosion of reinforcement.

Steel reinforcement projects from roof slab. With reference to soil test report, and existing column stresses, further vertical extension is not permitted.



Column starters projecting from roof

Building 1 (5 storey extension) Stair openings through slab



Opening through slab, believed to be an alteration after the slab was formed. Previous structural survey in August 2013 highlighted lack of edge beam to opening

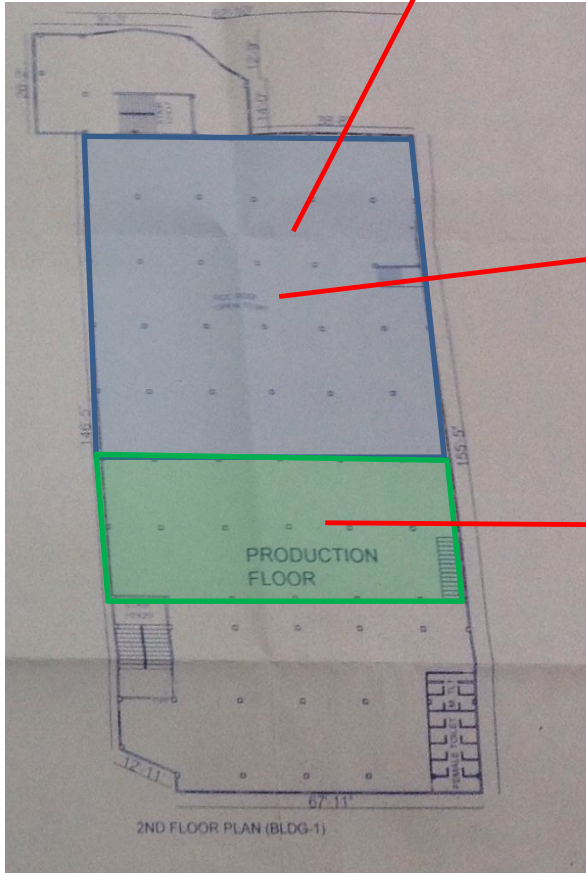
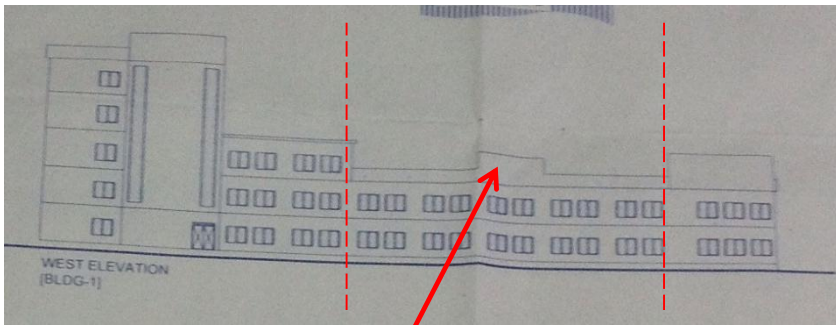
Steel frame added following previous structural survey. Frame added is ineffective stiffening slab opening edge (see dotted lines for more appropriate locations)



Opening through slab for stair

Building 1 – Partial removal of steel roof

Steel roof structure was removed last year following a BGMEA inspection.



Steel structure not inspected; not visible due to suspended ceiling

Removal of steel roof

**Building 2 –
Aggregate type different to Engineering
drawing. Future storey planned (not
currently detailed on permit or engineers
drawings)**



Starter bars extended above the roof of Building 2 for another storey to be added in the future.

Floor with heaviest load requirement should be placed on the ground floor where practical. Building Engineer to confirm capacity of floor slabs and columns.

No vertical extension of the building should commence without the correct engineering and permit approvals.



First Floor Storage

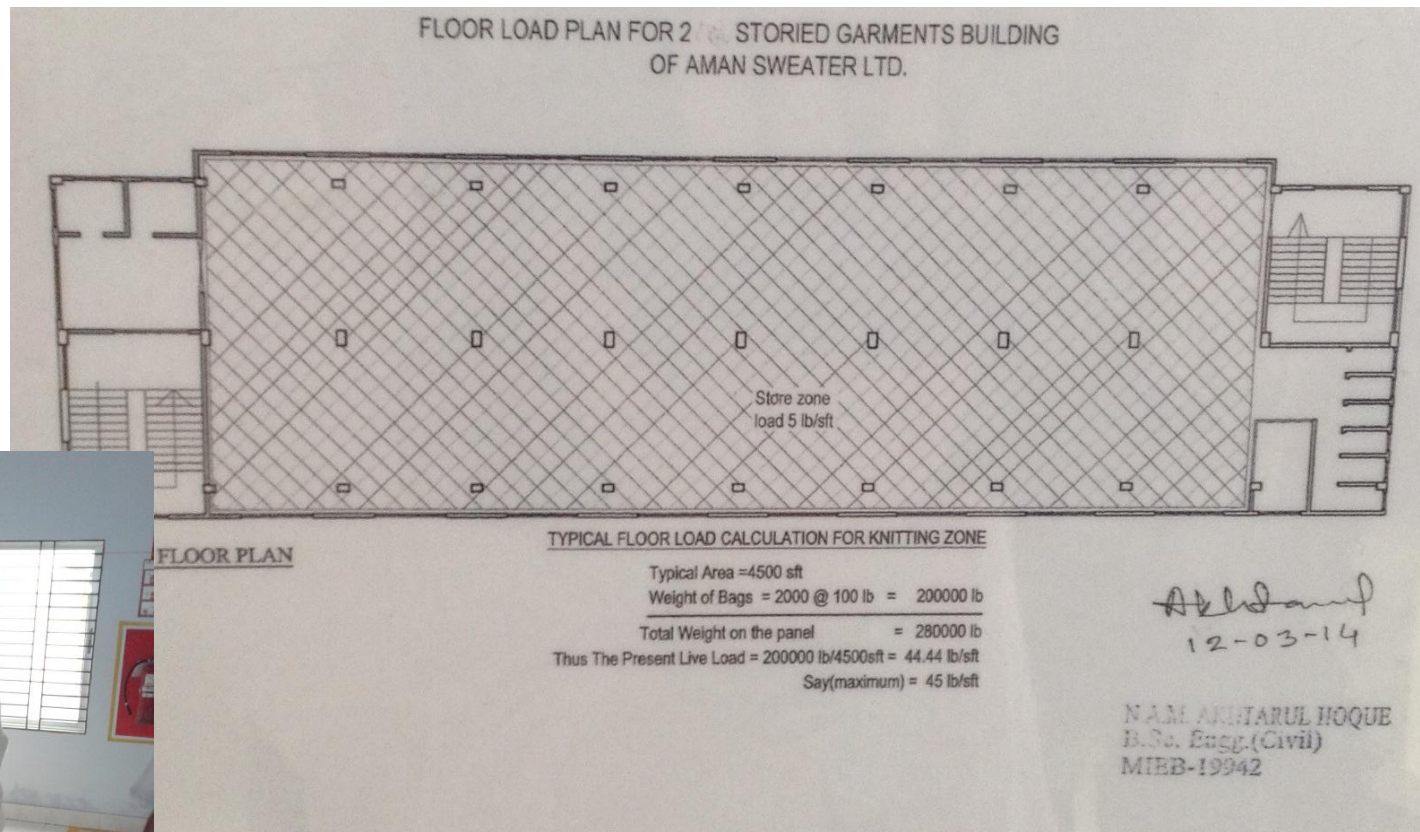


Ground Floor Winding

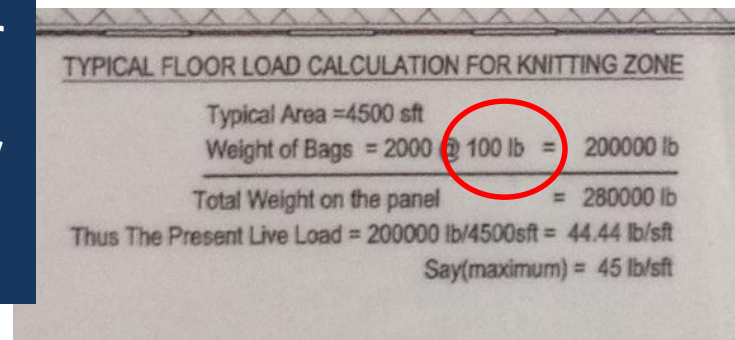


Brick aggregate discovered, understood to be stone.

Aggregate type and planned increases in column loads



Loading plans consider full floor area. An individual column may experience higher loading



Aggregate type and planned increases in column loads

Building 2 – Open excavation near building



Unprotected excavation located nearby foundations of Building 2.

Engineering drawings indicate foundations extend 10 ft (3m) below ground level thus excavation does not undermine building structure.

Open excavation near building

Priority Actions

Problems Observed

1. Foundation design of 5 storey section of Building 1 (understood being addressed).
2. Building 1 (5 storey extension) column reinforcement projecting from roof.
3. No framing around openings in slabs for stairs in 5 storey section of Building 1 (not effectively addressed).
4. Column stresses in building 2 (in view of future planned construction of 3rd storey and brick aggregate found when stone was stated on drawing).

Item No.	Observation	Recommended Action Plan	Priority
1	Building 1 -Soils report identifies poor soil	Check on foundation capacity/ foundations loads and if required design of remediation/ strengthening to be complete.	6-weeks
2	Building 1 -Soils report identifies poor soil	Factory Engineer to review design, loads and columns stresses. Verify insitu concrete stresses either by cores from 4 columns or existing cylinder strength data.	6-weeks
3	Building 1 -Soils report identifies poor soil	Any remedial / strengthening work that is identified by the Building Engineer in relation to foundation capacity is to be complete.	6-months
4	Building 1 - column reinforcement projecting from roof. Unprotected against corrosion.	Protect projecting bars by casting a concrete 'cap' over area of column.	6-weeks
5	Building 1 - column reinforcement projecting from roof. Unprotected against corrosion.	Fix water tank overflow so that it doesn't discharge on to column below.	6-weeks

Item No.	Observation	Recommended Action Plan	Priority
6	No framing around openings in slabs for stairs in 5 storey section of Building 1	Ensure structural bay with slab opening is not used for storage (i.e. heavy loading to be kept away from edge of opening).	6-weeks
7	No framing around openings in slabs for stairs in 5 storey section of Building 1	Building engineer to check design of slab where edge of opening is not supported (i.e. where there is not an existing concrete beam), giving consideration to reinforcement quantity and loading. Engineer to design strengthening if required.	6-weeks
8	Column stresses in building 2	Construction of an additional storey shall not commence without adequate structural design and approval where Factory Engineer review design, loads and columns stresses .	6-months
9	Column stresses in building 2	Verify insitu concrete stresses either by cores or existing cylinder strength data for the identified columns.	6-months
10	Column stresses in building 2	Consider locating the floor usage with heaviest loads (i.e. storage) on the lowest level where practical.	6-months