

South End Sweater Co Ltd.

House 70, Block D, Road Mokom Ali Sarker, Ward 03, Turag, Dhaka - 1230.

(23.882633N, 90.358845E)

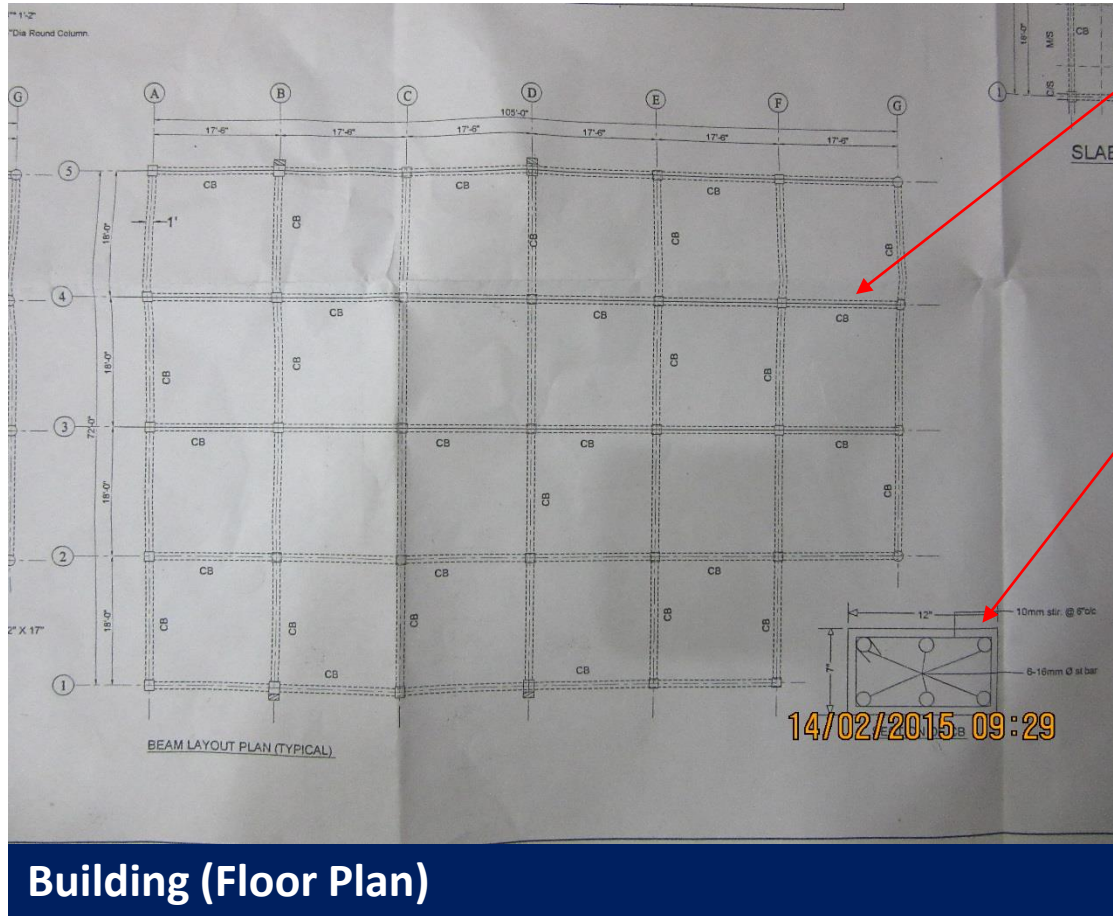
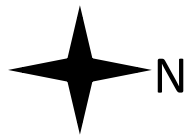
14th February 2015



Observations

High punching shear values around flat slab columns

Discrepancy in slab reinforcement between drawings and site



Concealed beams (CB):
Drawing shows concealed R.C. beam reinforcement (contained in depth of slab) in column strips.

Contractor opened small area of slab at 3rd floor level and there was no evidence of CB rebar.



Extract from Structural Drawing

**Cantilevered walkway south of main
building at 3rd floor level not on drawings**



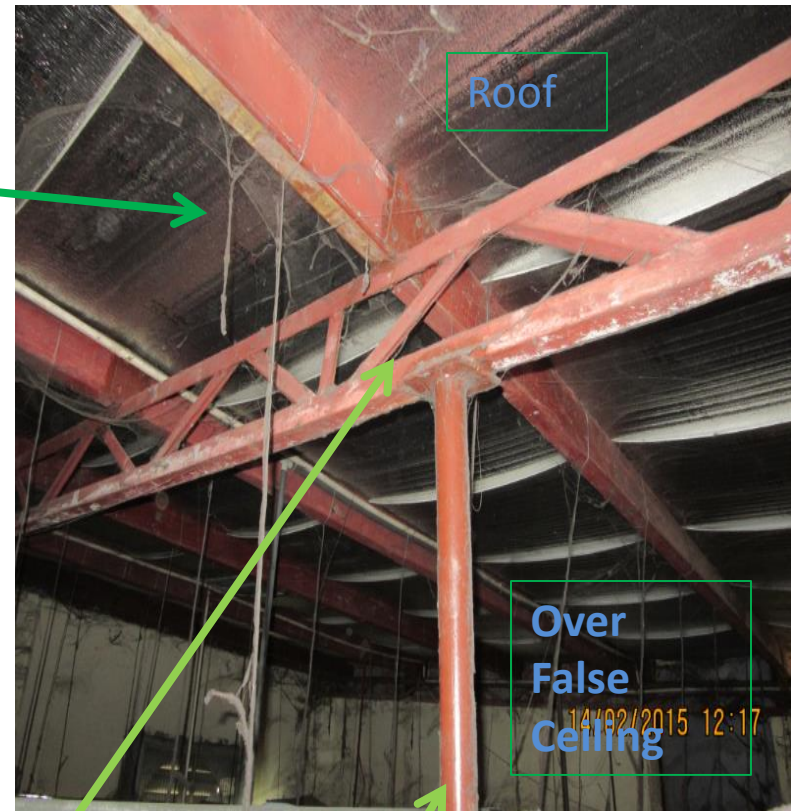
**Cantilevered Slab at 3rd
floor level**

South (Rear) Elevation

Apparently non-engineered roof structure in Shed 1 Building B 2



East Elevation Building B 2



Roof

Over
False
Ceiling

14/02/2015 12:17



Below
False
Ceiling

14/02/2015 12:10

60mm Circular Hollow Section
support.
Support not under nodal
point on truss.

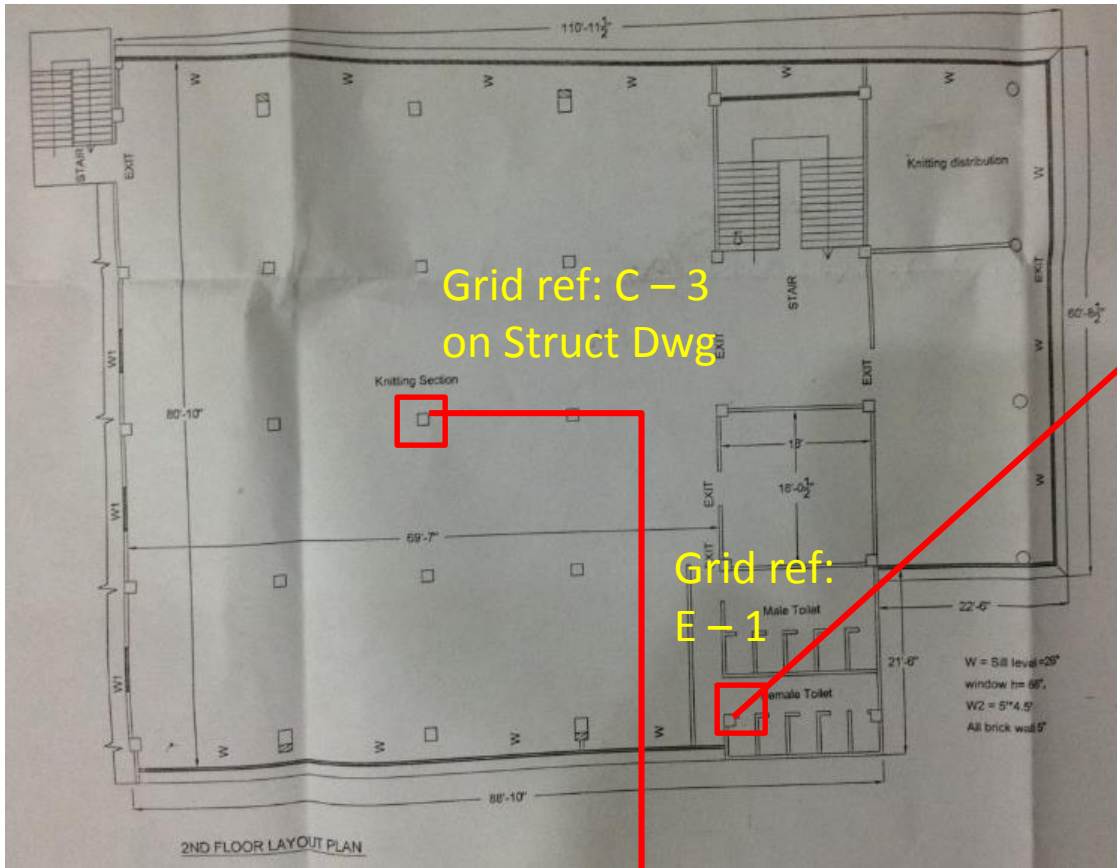
Permit approval required for 2 Storey Extension



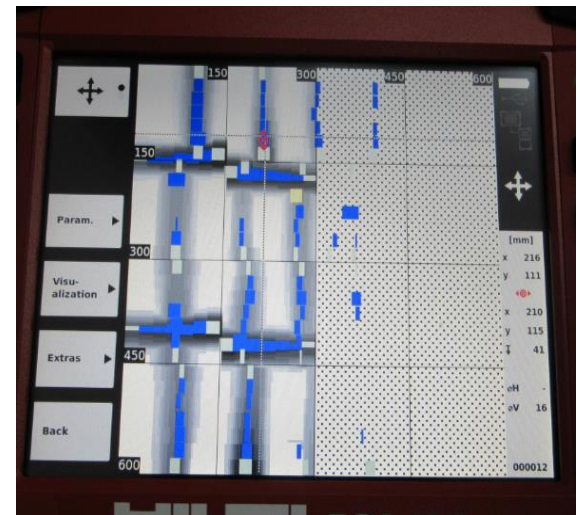
No permit has been received for this two storey extension at the rear of the building B1

South (Rear) Elevation

Column Testing



Brick Aggregate



Reinforcement scan agrees with drawing information and reinforcement at the tested column

Column Testing

Priority Actions

Problems Observed

ITEM 1: Punching shear around flat slab columns appears high

ITEM 2: Discrepancies in reinforcement between drawings and site

ITEM 3: Cantilevered walkway south of main building at 3rd floor level does not appear on drawings.

ITEM 4: Apparently non-engineered roof structure in Building B 2

ITEM 5: Permit approval still required for 2 Storey Extension

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	High punching shear in flat slab	Factory engineer to review design loading and stresses in flat slab after verifying concrete strength by taking 4 No 100 dia cores.	6-weeks
2	High punching shear in flat slab	Carry out remedial action as required by factory engineer	6-months
3	Discrepancies in reinforcement between drawings and site	Factory engineer to verify presence of reinforcement shown in "CD" column strips in suspended slabs. Verify adequacy of design if "CD" reinforcement is not present throughout all suspended floor plates	6-weeks
4	Discrepancies in reinforcement between drawings and site	Carry out remedial action as required by factory engineer	6-months
5	Cantilevered walkway south of main building at 3rd floor level not on drawings	Factory engineer to review cantilevered slab to south of building B1 at Level 3 and check its structural adequacy.	6-weeks
6	Cantilevered walkway south of main building at 3rd floor level not on drawings	Carry out remedial works as required	6-months
7	Cantilevered walkway south of main building at 3rd floor level not on drawings	Update as "built drawings"	6-months
8	Apparently non-engineered roof structure in Shed 1 Building B2	Factory engineer to check that 60mm diameter Circular Hollow Section (CHS) columns have sufficient capacity to support roof.	6-weeks
9	Apparently non-engineered roof structure in Shed 1 Building B2	Engineer to confirm roof truss bottom boom has capacity to support CHS bending and shear stresses.	6-weeks
10	Apparently non-engineered roof structure in Shed 1 Building B2	Carry out remedial actions as required	6-months
11	Permit Approval for two Extension to South of Main Building still required	Owner liaise with local authority to establish status of Building Permit for Two Story Extension to South of Main Building	6-months