

Orient Allure Lingerie Ltd. (Unit - 2)

Hijalhati, Baroipara, Kaliakoir, Gazipur

(24.027286, 90.239123)

14 May 2025



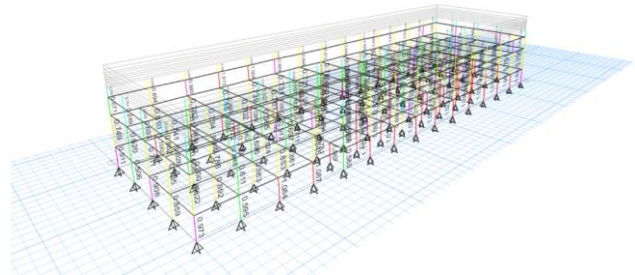
1. Building Information

1. **Production Building:** The structure is a two-storied (G+1) reinforced concrete (RC) building with a steel roof.
2. **Office Building:** The structure is a two-storied RC building.
3. **Dining Building:** The structure is a two-storied RC building.
4. **ETP Building:** The structure is a single-storied RC building with an underground ETP tank.
5. **Sub-station Building:** The structure is a single-storied RC building (It is a part of 6-storied production building of Haesong Corporation).

2. Observation:

Observation-01: Inconsistencies in the design report & design seismic base shear. (Production Building)

SCHEDULE OF COLUMN SIZE AND REINFORCEMENT			
COLUMN ID	BELOW GROUND LEVEL		GROUND TO 1ST FLOOR LEVEL
	NOS OF REINFORCEMENT	COLUMN SIZE	COLUMN SIZE
C1	●8-16mmØ	425 425	350 350
C1A	●4-20mmØ+ ●4-16mmØ	425 575	350 500
C2	●6-16mmØ	375 375	300 300



No information on Column Tie Bar in Column Schedule

Considering R=5 OMRF, Columns found overstressed

3.4) SEISMIC LOAD

IMRF Justification for Column:

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Column ID	Width	Depth	Smallest dimension of column	Tie Bar Dia.	Dia. Of smallest longitudinal bar	Tie bar spacing (Support)	Tie bar spacing (Middle)	Criteria 0.5 x Smallest dimension of column	8 x Diameter of smallest longitudinal bar	24 x Diameter of tie bar	300mm	Minimum spacing Required.	Maximum spacing Allowed, 2 x s	Remarks
C1	14.00 in	14.00 in	14.00 in	10 mm	16 mm	5 in	7 in	7.0 in	5.1 in	9.6 in	12.0 in	5.1 in	10.2 in	IMRF
C1A	14.00 in	20.00 in	14.00 in	10 mm	16 mm	5 in	7 in	7.0 in	5.1 in	9.6 in	12.0 in	5.1 in	10.2 in	IMRF
C2	12.00 in	12.00 in	12.00 in	10 mm	16 mm	5 in	7 in	6.0 in	5.1 in	9.6 in	12.0 in	5.1 in	10.2 in	IMRF

IMRF Justification for Beam:

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Beam ID	Width, B	Depth, H	Effective depth, d	Stirrup Bar Dia.	Dia. Of smallest longitudinal bar	Stirrup spacing (Support)	Stirrup spacing (Middle)	Criteria d/4	8 x Diameter of smallest longitudinal bar	24 x Diameter of stirrup	300mm	Minimum spacing	Maximum spacing, d/2	Critical Zone for Stirrup (2'H from support face)	Provided Length	Remarks
FB-01	10	28	25.5 in	10 mm	20 mm	4.0 in	7.0 in	6.4 in	6.4 in	9.6 in	12.0 in	6.4 in	12.8 in	56.0 in	56.0 in	IMRF
FB-02	10	21	18.5 in	10 mm	16 mm	4.0 in	7.0 in	4.6 in	5.1 in	9.6 in	12.0 in	4.6 in	9.3 in	42.0 in	42.0 in	IMRF



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Description: Inconsistencies were found in the design report and design seismic base share considering the framing system. As per the drawing and on-site observation, columns do not meet the IMRF requirements. On-site column tie bar spacing at the support was found to be 6 inches (150 mm) instead of 5 inches (125 mm). Considering the OMRF, several columns were found to be overstressed.

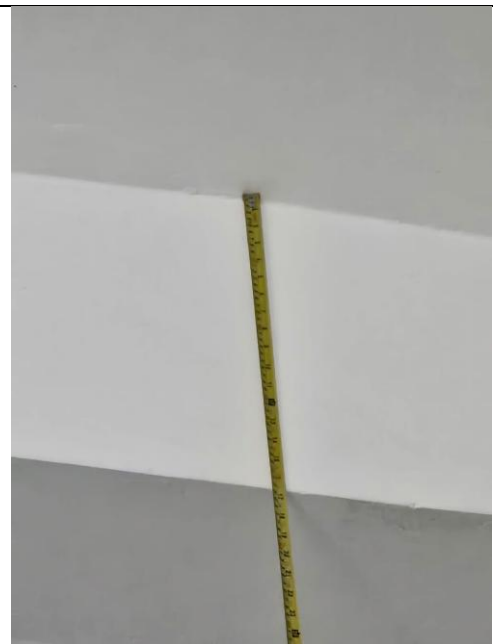
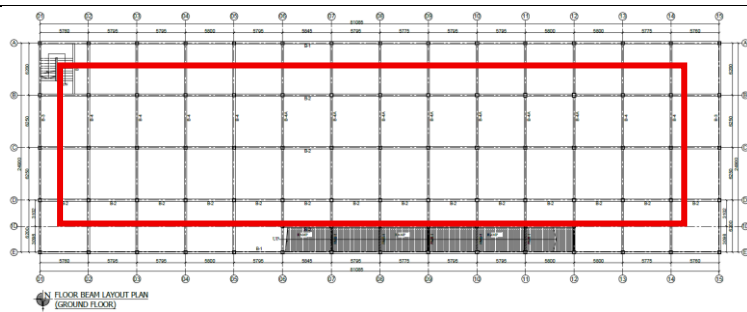
Building engineer is required to check the onsite conditions and address all the inconsistencies in the design report.

Observation-02: Discontinuity of welding in the retrofitting members. (Production Building)



Description: During the inspection, a gap in welding was found in the retrofitting structural member. To make a section compact, the building engineer is required to carry out local remedial (continuous welding) works as required.

Observation-03: Mismatch in the as-built drawing. (Production Building)



Description: The marked beam's down stand found 400 mm instead of 550 mm. The building engineer is required to survey the structure and update the as-built drawing as per onsite conditions.

Observation-04: Anchorage of non-structural elements (Production Building)



Description: Lack of anchorage was found on the storage racks. Provide anchorage on the non-structural elements.

Observation-05: Dampness on the brick wall (Production Building)



Description: Dampness was found on the brick wall. Building engineer is required to remove the dampness and repair it with a suitable method.

Observation-06: Loading on the false slab. (Production Building)



Description: Storage loading observed on the false slab. Building engineer is required to remove the loading from the false slab. Otherwise, check the design of false slab & load-bearing walls for loadings.

Observation-07: Exposed rebar. (Office Building)



Description: Exposed rebar observed on the office building is prone to corrosion. Building engineer is required to remove the rust and provide an anti-corrosive coating.

Observation-08: Construction safety around the building. (Dining Building)



Description: Lack of construction safety practice observed around the dining building and the walking way around the building. The building engineer is required to immediately implement construction safety practices around the building as per BNBC Part 7, Chapter 3.

Observation-09: Inconsistencies in the design report. (Dining Building)

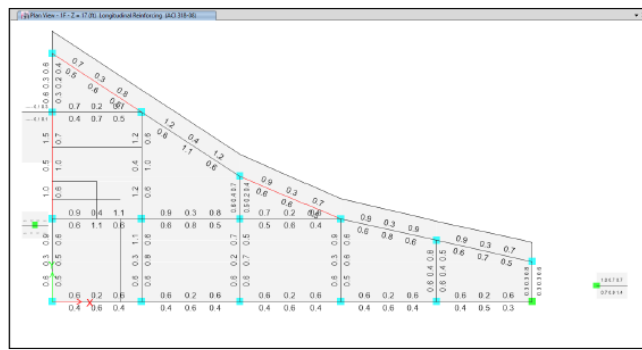
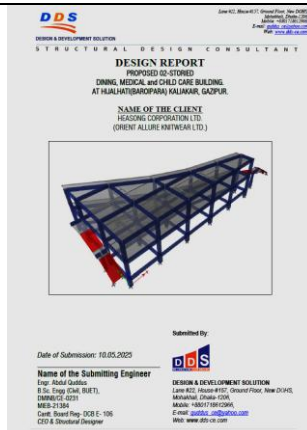


Fig- 1st Floor Beam Reinforcement

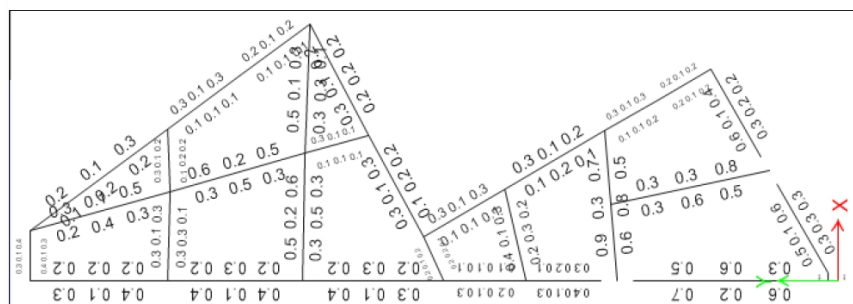
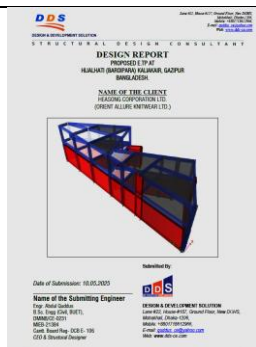
Description: The shape of the building is irregular. A design report was available considering BNBC 2020. But different types of irregularity checks were not provided in the report. The building engineer is required to address the inconsistencies in the design report and submit revised design documents to RSC for review.

Observation-10: Falling Hazard (ETP Building)



Description: Falling Hazard observed on the ETP building. The building engineer is required to provide safety guard/ handrails.

Observation-11: Inconsistencies in the design report. (ETP Building)



Description: The shape of the building is irregular. A design report was available considering BNBC 2020. But different types of irregularity checks were not provided in the report. The building engineer is required to address the inconsistencies in the design report and submit revised design documents to RSC for review.

Observation-12: Dampness on the slab (Sub-Station Building)



Description: Dampness was observed on the slab of the substation building. Building engineer is required to prepare an Investigation report with repair methodology. Repair the dampness as per the recommendation of the investigation report.

3. Action Plan

Item No	Observation	Action Plan	Timeline
1.	Inconsistencies in the design report & design seismic base shear. (Production Building)	The building engineer is required to check the onsite conditions and address all the inconsistencies in the design report.	within 6 weeks
2.		Carry out the suggested remedial work if required.	within 6 months
3.	Discontinuity of welding in the retrofitting members. (Production Building)	To make a section compact, the building engineer is required to carry out local remedial (continuous welding) work as required.	within 6 weeks
4.	Mismatch in the as-built drawing. (Production Building)	The building engineer is required to survey the structure and update the as-built drawing as per onsite conditions.	within 6 weeks
5.	Anchorage of non-structural elements (Production Building)	Provide anchorage on the non-structural elements.	within 6 months
6.	Dampness on the brick wall (Production Building)	Building engineer is required to remove the dampness and repair with a suitable method.	within 6 weeks
7.	Loading on the false slab. (Production Building)	Building engineer is required to remove the loading from the false slab. Otherwise, check the design of false slab & load-bearing walls for loadings.	within 6 weeks
8.	Exposed rebar (Office Building)	The building engineer is required to remove the rust and provide an anti-corrosive coating.	within 6 weeks
9.	Construction safety around the building. (Dining Building)	The building engineer is required to immediately implement construction safety practices around the building as per BNBC Part 7, Chapter 3.	Immediate
10.	Inconsistencies in the design report. (Dining Building)	The building engineer is required to address the inconsistencies in the design report and submit revised design documents to RSC for review.	within 6 weeks
11.		Carry out the suggested remedial work if required.	within 6 months
12.	Falling Hazard (ETP Building)	The building engineer is required to provide safety guards/ handrails.	within 6 weeks

13.	Inconsistencies in the design report. (ETP Building)	Building engineer is required to address the inconsistencies in the design report and submit revised design documents to RSC for review.	within 6 weeks
14.		Carry out the suggested remedial work if required.	within 6 months
15.	Dampness on the slab (Sub-Station Building)	Building engineer is required to prepare an Investigation report with repair methodology. Repair the dampness as per the recommendation of the investigation report.	within 6 weeks