

# Pioneer Knitwears (BD) Ltd. (Section-2) (Extension)

Jamirdia, Habirbari, Valuka, Mymensingh-2240.

(24.321482, 90.379077)

23 November 2023



## 1. Building Information

**Linking Floor C&D:** A single-storied steel shed.

**Yarn Go-Down:** A single-storied steel shed.

**Dining Building-2:** A five-storied (G+4) reinforced concrete building.

**Security Building-2:** A two-storied (G+1) reinforced concrete building.

**Civil Godown:** A single-storied steel shed.

**Substation:** A single-storied steel shed.

**Generator Shed:** A single-storied steel shed.

**Generator Godown Shed:** A single-storied steel shed.

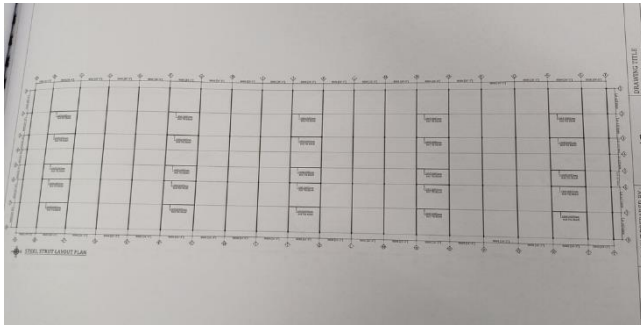
**Fire Pump:** A single-storied steel shed.

**Scrap Godown:** A single-storied steel shed.

## 2. Observations:

### Linking Floor-C&D

**Observation-01:** Lack of information and mismatch in as-built drawing. (Linking Floor-C&D)



Strut Layout



Compression strut on end bay

**Description:** No connection details were found in the provided as-built drawings. The building engineer is required to survey the structure and prepare accurate as-built drawings.

**Observation-02:** Incomplete lateral stability system. (Linking Floor-C&D)



Strut Layout



Compression strut on end bay

**Description:** No compression strut was found along the ridge lines of the long direction. Also, other strut members were found to be discontinued along the long direction. So lateral stability in the long direction is incomplete. The building engineer is required to check the stability system of the existing structure.

**Observation-03:** Inclined steel column. (Linking Floor-C&D)



Incline column at East



Incline steel column

**Description:** An inclined steel column was found on the East side of the shed. The stability of the distorted columns and related elements need to be checked.

**Observation-4:** Discrepancies in as-built drawings (Yarn Go-down).



SC1 column flange measured 168 mm

| STEEL COLUMN SCHEDULE: |                                                                                                                                                                  |       |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| COLUMN ID              | UP TO ROOF                                                                                                                                                       |       |
| SC1                    | <br>SC1<br>F250(8)XW260(4)<br>BP1<br>300X250X15mm<br>ANCHOR BOLT<br>4-16mmØ | _____ |
| SC2                    | <br>SC2<br>F175(8)XW260(4)<br>BP2<br>300X225X12mm<br>ANCHOR BOLT<br>4-16mmØ | _____ |
| SC3                    | <br>SC3<br>F150(6)XW260(4)<br>BP3<br>260X200X12mm<br>ANCHOR BOLT<br>4-20mmØ | _____ |

Column schedule

**Description:** During the inspection, the SC1 column flange was measured 168 mm in grid J/6 instead of 200 mm which was shown in provided as-built structural drawing. The building engineer is required to survey the full structure and produce accurate as-built drawings.

**Observation-5: Lack of Lateral Stability. (Yarn Go-down)**



Missing compression strut



No vertical or Horizontal bracing

**Description of observation:** Portal frame is provided along the short direction. Any compression member along a long direction with any lateral or horizontal bracing was not available. Building engineer is required to check the lateral stability of the structure.

**Observation-6: Lack of design report (Canteen-2).**



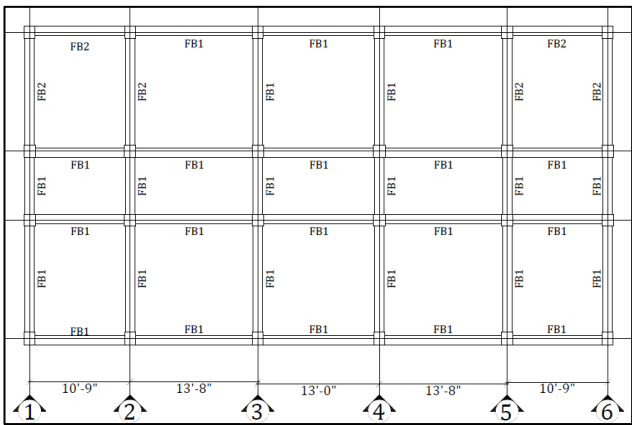
**Description:** As per BNBC, every building or structure designed shall have its design documents prepared following the provision of Section 1.9.1. The design documents shall include as-built drawings and a design report which shall be prepared in compliance with section 1.9.1, part 6 of BNBC.

During inspection, the design report was not available on site. The building engineer is required to prepare a design report based on in-situ material strength & software-based analysis and submit it to RSC for review.

**Observation-7:** Lack of information in as-built drawings (Canteen-2).



SC1 column flange measured 168 mm



Column schedule

**Description:** In the as-built structural drawing no beam and slab details for the room top beam and slab were available. Only a typical floor beam layout was provided. The building engineer is required to survey the full structure and produce accurate as-built drawings.

**Observation-08:** Incomplete as-built drawing. (Security Building-02)



Cantilever Beam



External steel stair

**Description:** Cantilever beams were not shown in the beam layout. Also, no drawings were found for the external steel stairs. The building engineer is required to survey the structure and prepare accurate as-built drawings.

**Observation-09:** Lack of design report. (Security Building-02)



Security Building-02

**Description:** As per BNBC, every building or structure designed shall have its design documents prepared following the provision of Section 1.9.1. The design document shall include a design report, and a set of structural drawings, which shall be prepared in compliance with section 1.9.1.1 and section 1.9.1.2, part 6 of BNBC.

**Observation-10:** Lack of Lateral Stability. (Civil Godown, Substation, Generator Shed, Generator Godown Shed)



Civil Godown



Substation



Generator Shed



Generator Godown Shed

**Description of observation:** Truss frame and rafter are provided along the short direction. Any compression member along a long direction with any lateral or horizontal bracing was not available. Building engineer is required to check the lateral stability of these structures.

**Observation-11:** Lack of information in as-built drawing. (Scrab Godown)



Steel angle connection with steel column



Steel angle connection with brick wall

**Description:** Connection details of steel angles were not found in the provided as-built drawings. The building engineer is required to survey the structure and prepare accurate as-built drawings.

**Observation-12:** Apparently inadequate steel column and connection. (Scrab Godown)



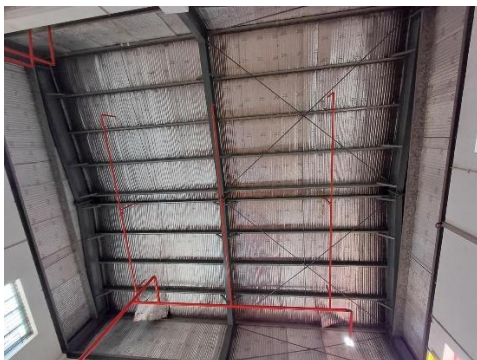
Steel column



Apparently inadequate connection

**Description:** Apparently inadequate steel columns and connections were observed on the lightweight roof of the single-storied Sheds. The building engineer checks the connection adequacy of the lightweight roof against the uplift pressure of the wind.

**Observation-13:** Incomplete lateral stability system. (Fire Pump House)



Roof framing with compression strut



**Description:** No compression strut was found along the East-west direction. The building engineer is required to check the stability system of the existing structure.

### 3. Action Plan:

| Serial | Observation                                                               | Action Plan                                                                                                                                                                                                                       | Timeline        |
|--------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1      | Lack of information and mismatch in as-built drawing. (Linking Floor-C&D) | The building engineer is required to survey the structure and prepare accurate as-built drawings.                                                                                                                                 | within 6 weeks  |
| 2      | Incomplete lateral stability system. (Linking Floor-C&D)                  | The building engineer is required to check the lateral stability of the structure.                                                                                                                                                | within 6 weeks  |
| 3      | Incomplete lateral stability system. (Linking Floor-C&D)                  | Carry out remediation work if required.                                                                                                                                                                                           | within 6 months |
| 4      | Inclined steel column. (Linking Floor-C&D)                                | The building engineer is required to review the design of the distorted steel column considering the as-built condition of the column.                                                                                            | within 6 weeks  |
| 5      | Inclined steel column. (Linking Floor-C&D)                                | Carry out remedial works (if any) after being reviewed by RSC.                                                                                                                                                                    | within 6 months |
| 6      | Lack of design report. (Security Building-02)                             | Building engineer is required to prepare the design documents including a design report, and a set of structural drawings in compliance with section 1.9.1.1 and section 1.9.1.2, part-6 of BNBC and submit it to RSC for review. | within 6 weeks  |
| 7      | Lack of design report. (Security Building-02)                             | Carry out remedial works (if any) after review by RSC.                                                                                                                                                                            | within 6 months |
| 8      | Incomplete as-built drawing. (Security Building-02)                       | The building engineer is required to survey the structure and prepare accurate as-built drawings.                                                                                                                                 | within 6 weeks  |
| 9      | Discrepancies in as-built drawing. (Yarn Go-down)                         | The building engineer is required to survey the structure and prepare accurate as-built drawings.                                                                                                                                 | within 6 weeks  |
| 10     | Lack of lateral stability system. (Yarn Go-down)                          | The building engineer is required to check the lateral stability of the structure.                                                                                                                                                | within 6 weeks  |
| 11     | Lack of lateral stability system. (Yarn Go-down)                          | Carry out remediation work if required.                                                                                                                                                                                           | within 6 months |
| 12     | Lack of information in as-built drawing. (Scrab Godown)                   | The building engineer is required to survey the structure and prepare accurate as-built drawings.                                                                                                                                 | within 6 months |
| 13     | Lack of design report. (Canteen-2)                                        | Building engineer is required to prepare the design documents including a design report, and a set of structural drawings in compliance with section 1.9.1.1 and section 1.9.1.2, part-6 of BNBC and submit it to RSC for review. | within 6 weeks  |
| 14     | Lack of design report. (Canteen-2)                                        | Carry out remedial works (if any) after review by RSC.                                                                                                                                                                            | within 6 months |
| 15     | Lack of information in as-built drawing. (Canteen-2)                      | The building engineer is required to survey the structure and prepare accurate as-built drawings.                                                                                                                                 | within 6 weeks  |
| 16     | Lack of Lateral Stability. (Civil Godown)                                 | The building engineer is required to check the lateral stability of the structure.                                                                                                                                                | within 6 weeks  |

|    |                                                                     |                                                                                                                                      |                 |
|----|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 17 | Lack of Lateral Stability. (Civil Godown)                           | Carry out remediation work if required.                                                                                              | within 6 months |
| 18 | Lack of Lateral Stability. (Substation)                             | The building engineer is required to check the lateral stability of the structure.                                                   | within 6 weeks  |
| 19 | Lack of Lateral Stability. (Substation)                             | Carry out remediation work if required.                                                                                              | within 6 months |
| 20 | Lack of Lateral Stability. (Generator Shed)                         | The building engineer is required to check the lateral stability of the structure.                                                   | within 6 weeks  |
| 21 | Lack of Lateral Stability. (Generator Shed)                         | Carry out remediation work if required.                                                                                              | within 6 months |
| 22 | Lack of Lateral Stability. (Generator Godown Shed)                  | The building engineer is required to check the lateral stability of the structure.                                                   | within 6 weeks  |
| 23 | Lack of Lateral Stability. (Generator Godown Shed)                  | Carry out remediation work if required.                                                                                              | within 6 months |
| 24 | Apparently inadequate steel columns and connections. (Scrab Godown) | The building engineer is required to check member adequacy and the connection of the steel roof for the uplift pressure of the wind. | within 6 weeks  |
| 25 | Apparently inadequate steel columns and connections. (Scrab Godown) | Carry out remediation work if required.                                                                                              | within 6 months |
| 26 | Incomplete lateral stability system. (Fire Pump House)              | The building engineer is required to check the lateral stability of the structure.                                                   | within 6 weeks  |
| 27 | Incomplete lateral stability system. (Fire Pump House)              | Carry out remediation work if required.                                                                                              | within 6 months |