

PRINCIPAL BRIDGE INSPECTION REPORT

LRP name: 24a.

Zone: Dhaka; Circle: Dhaka; Division: Munshigonj.

Road No.: N-1

Road Name: Dhaka-Comilla-Chittagong Technaf Road Road

1. Summary

- 1.1 The principal bridge inspection of this **Meghna Bridge** was carried out by SARM – DUL Consortium on the 13th Sept. 2004.
- 1.2 This was constructed in 1989.
- 1.3 The structure is in fair condition but some repair works are needed.

2. General Information

- 2.1 The bridge is located at chainage 24.393 Km of Dhaka-Comilla-Chittagong, Road (N-1). This is a 900m.long P.C. I girder and P.C. Box girder bridge (Progressive Cantilever) having 13 spans. Length of individual spans are 24.25m, 24.25m, 48.3m., 9 spans @ 87m. each and 1 8.2m. The width and carriage way of the bridge is respectively 9.2m. and 7.2m.

3. Results of inspection

3.1 Foundation

The foundations are supported on RCC caissons and piles. Piled foundation of abutments are buried and therefore could not be visually inspected. A visual inspection conducted at the foot of the abutments revealed no cracks. RCC caissons that are used as foundation under the piers are also buried that's why it was not possible to assess their condition. However, there is no sign of movement of piers.

3.2 Abutment

Both abutments are RCC, solid type and condition is good.

3.3 Pier

Piers are R.C.C solid type. They are in fair condition but pier no. 8 and 9 shows concrete spalling.

3.4 Wing Walls

All the wing walls are of R.C.C which are fixed with abutments and have no weep holes. They are in good condition.

3.5 Bearings

2 span where girders are P.C. simply supported I section have neoprene bearings. Other progressive cantilever 11 spans have no bearings.

3.6 P.C. I Girder, P.C Box Girder

2 span out of 13 have 5 no. P.C. girder at each span and the other 11 span have P.C. box girder. Condition of these girders are good. There is no sign of crack or excessive deflection in these girders.

3.7 Railing

Railing type is of R.C.C post & steel rail.

The overall condition of the railing is fair, though minor damage is observed. It has 0.80m. wide foot path at both sides.

3.8 Deck Slab

The condition of RCC deck slab is in quite good condition. But minor quantity of concrete spalling has been observed.

3.9 Wearing Course

The wearing course is of bitumen type, it needs repair work.

3.10 Expansion Joint

Expansion joints are partially damaged. 4 number of expansion joints need replacement and another 2 number need repair.

3.11 Approach Protection and Drainage

Abutment approach protection and drainage is in good condition though minor damage is observed. The bridge has drainage facility.

3.12 Navigability

It is navigable during all season. Most of the river traffics are big boats including country boat, engine boat, small ships etc. Their height are mostly 10m.

3.13 Recommendation

The condition of the bridge is good.

But:

8sqm over 8 & 9 no. pier need repair for concrete spalling

12m length of railing at left side need repair

2sqm deck need repair, 12sqm approach road at side of the bridge need repair

2sqm slope protection need repair, 8sqm side walk at right side need repair

6m. expansion joint, 2m. railing need repair and 4 m. railing need replacement.



TOP VIEW OF BRIDGE



SIDE VIEW OF BRIDGE



APPROACH ROAD BRIDGE



ANOTHER TOP VIEW OF THE BRIDGE