Name of the Project	:	**VISUAL INSPECTION OF ROB No 101A NEAR DHONE RAILWAY STATION**
Location	:	**Near Dhone Railway Station**
Location Co-ordinates	:	**15°24'03.1"N 77°51'20.4"E**
Date of Inspection	:	**24th NOVEMBER, 2019**



Summary:

a) Structural Cracks have been observed at the Slab overhang portions.
b) Spalling and Reinforcement exposure is observed at the Slab overhang portions.
c) Cracks are observed at seating portion of longitudinal girder.
d) All the Bearings are completely distressed condition.
e) Moderate vibrations observed in the Bridge.
f) Patching work has been done on Longitudinal & Cross Girders.
g) Leaching observed at bottom of slab at drainage spout locations.

Tests to be conducted:

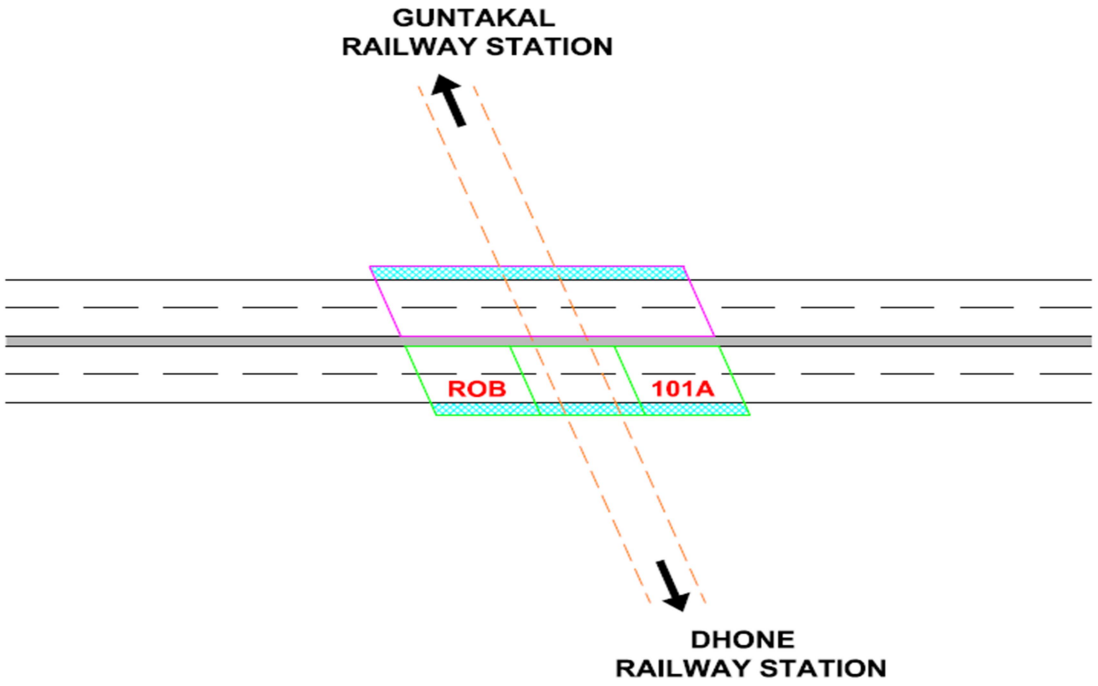
a) Rebound Hammer test to measure surface strength of the concrete.
b) Ultrasonic Pulse Velocity (UPV) Test to determine the Quality of concrete, such as uniformity and homogeneity of concrete, location of internal defects in concrete, porosity.
c) Profometer Test for the concrete cover and diameter of rebar.
d) Half-cell Potential Meter to measure the probability of corrosion.
e) Micrometer/card comparator is to determine the Crack width and depth.
f) Core Drilling Method is to evaluate the exact compressive strength of concrete.
g) Tests for Carbonation, pH and Chloride Content to determine the extent of chemical attack on concrete.
h) Vibration analysis

VISUAL INSPECTION OF ROAD OVER BRIDGE

Name of the Project	Visual inspection of ROB near Dhone Railway Station
Location	Near Dhone Railway station
Date of Inspection	24th November 2019.

PART 1 GENERAL INFORMATION AND OBSERVATION		
1.1	Name of the Bridge	ROB (101A)
1.2	Location Location co-ordinates	Near Dhone Railway Station 15°24'03.1"N 77°51'20.4"E
1.3	Type of Bridge	RCC Girder Bridge
1.4	Year of Construction	Data Not Available
1.5	Grade of Concrete	Data Not Available
1.6	Design Load	Data Not Available
1.7	Carriageway Width	7.5 m
1.8	Overall Deck Width	10.8 m
1.9	Average Skew	35°
1.10	Span arrangement (no x Span in meters)	3 x 12.5 m (Skew)
1.11	No of Railway Lines Crossings	01
1.12	Vertical Clearance (from rail top to girder bottom)	6.08 m
1.13	History of Repair/ Maintenance	Patch work has been done
1.14	Original Structural Drawings	Not available

1.15 Key Plan



	PART 2 STRUCTURAL SYSTEM OF THE BRIDGE		
			Notes
2.1	**Foundation details**		Not visible at site
	Type of foundation		
	Foundation Details (if available…)		
	Foundation Status (Check Settlement, abnormal Scour and Tilting, if any etc.…)		
	Type Of Damage (Check cracking, disintegration, decay, erosion, Cavitation's etc.,)		
2.2	**Abutment (A1 & A2)**		
	Type	Retaining wall and stone pitching cum Portal Frame pier	RCC Portal Frame with 3 circular columns
	Maximum height of Abutment from Ground level	-	
	Abutment width along the Track	9.5 m	
	Abutment thickness	Not Available	
	Condition (Crack, Settlement, Scour, Tilting, Steel Corrosion, Strains and other damages etc...)		stone pitching in fair condition
	Efficiency of drainage of backfill behind Abutments (Check functioning of weep holes, evidence of moisture on Abutment faces, etc..)		No Weep holes
2.3	**Pier**		
	Type (Shape)	Portal Frame	RCC Portal Frame with 3 circular columns. Minor Cracks Observed in Piers
	Material	RCC	
	No. of Piers in a row/column		
	Maximum Height of Pier	6.5 m	
	Pier Diameter/Dimension	0.8 m dia.	
	Pier Cap Material	RCC	
	Pier Cap Condition	Fair	
	Pier Condition (Crack, Settlement, Scour, Tilting, Steel Corrosion, Strains and other damages etc...)	Minor Cracks Observed	

2.4	**Bearing & Pedestal**		
	Type of Bearings	Elastomeric Pad	
	General condition (Check Corrosion, cleanliness, seizing of plates silting, accumulations of dirt in case of submersible bridges)		All the bearings are in completely distressed condition
	Type/ shape of Pedestal		No Pedestals are provided
	General condition (Check Corrosion,		
2.5	**Super Structure (Concrete Girder)**		
	Type/Shape of Girder (I-beam, box-	T-Girder	
	Material of Girder	RCC	RCC Girders
	No of Girder	07 Nos.	
	Dimensions of Girder		Depth of the web = 0.9 m Width of the web = 0.6 m
	Structural System of Girder		Simply Supported
	Condition of Girder		Patching Work has been done (Refer Fig.3 & 9)
	Type/Shape of Secondary Girder	Rectangular Girder	
	Material of Secondary Girder	RCC	
	No of Secondary Girders	5 Nos.	
	Condition of Secondary Girder		Patch works have been observed Refer (Fig.3)
2.6	**Slab**		
	Material of Slab	RCC	
	Thickness of Slab	-	Not Accessible
	Condition of Slab from Bottom		Spalling & Reinforcement exposure has been observed. (Refer Fig.7 & 8)
	Condition of Slab from Top		Not visible, covered with wearing coat
	Condition of Flooring/Wearing Coat		Expansion Joint has been filled with Bitumen
	Parapet wall/Railing		
	Type of Parapet wall/Railing	RCC Railing	
	Height	1.1 m	
	Condition of Wall/Railing		Cracks and Reinforcement exposure observed

PART 3 SURVEY OF SIGNS OF DISTRESS, DEFORMATION IN BRIDGES			
	Defects	**Location**	**Notes**
	Cracking in RCC components	Slab	cracks are observed in overhang portion of Slab & End portion of longitudinal girder
	Water seepage		No water seepage is observed
	Spalling	Slab	Spalling is observed at overhang portion of Slab
	Reinforcement Exposure	Slab	Reinforcement Exposure is observed at overhang portion of Slab
	Distress	Bearings	Distress observed in all bearings

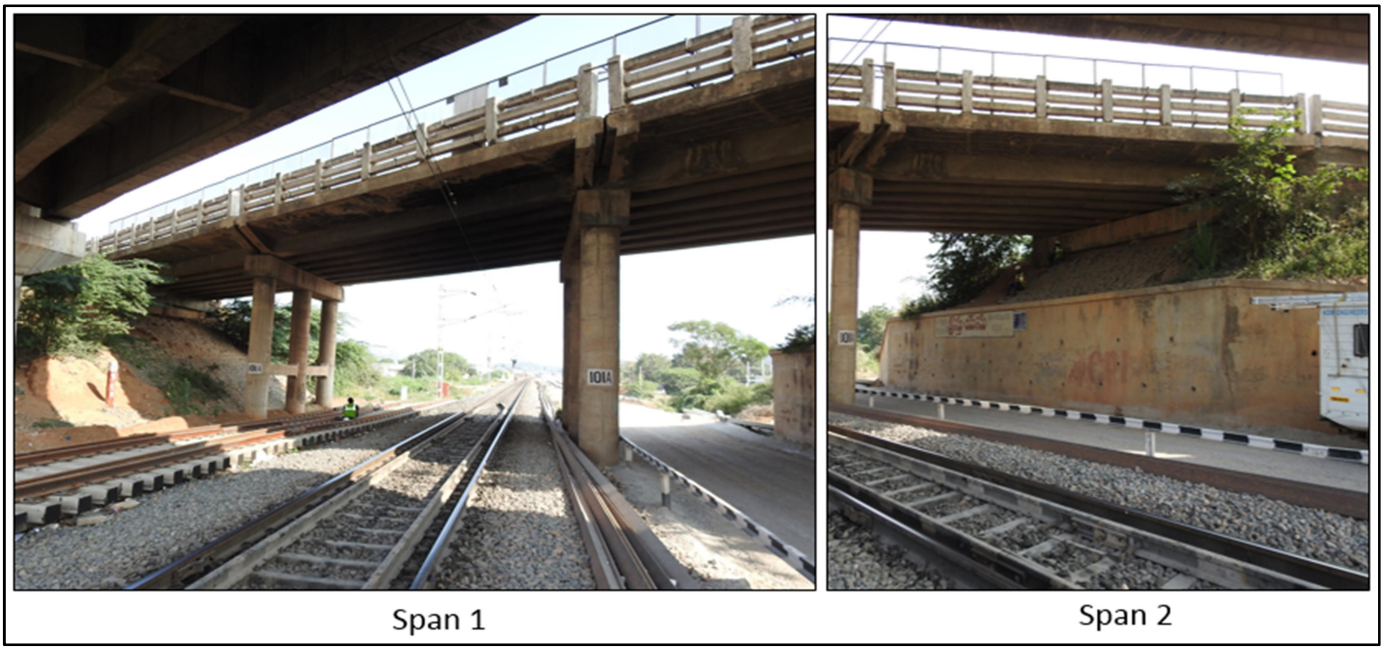


Fig.1: ROB Front View

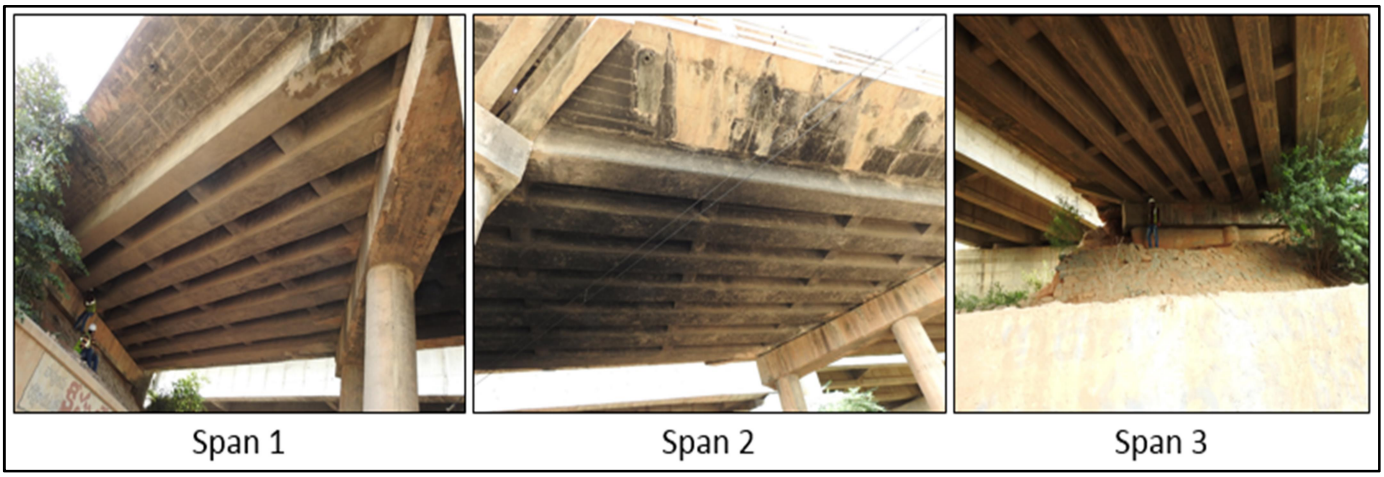


Fig.2: Longitudinal Girders Bottom View



Fig.3: Patch work observed in longitudinal and cross Girders



Fig.4: Longitudinal Girders bottom View

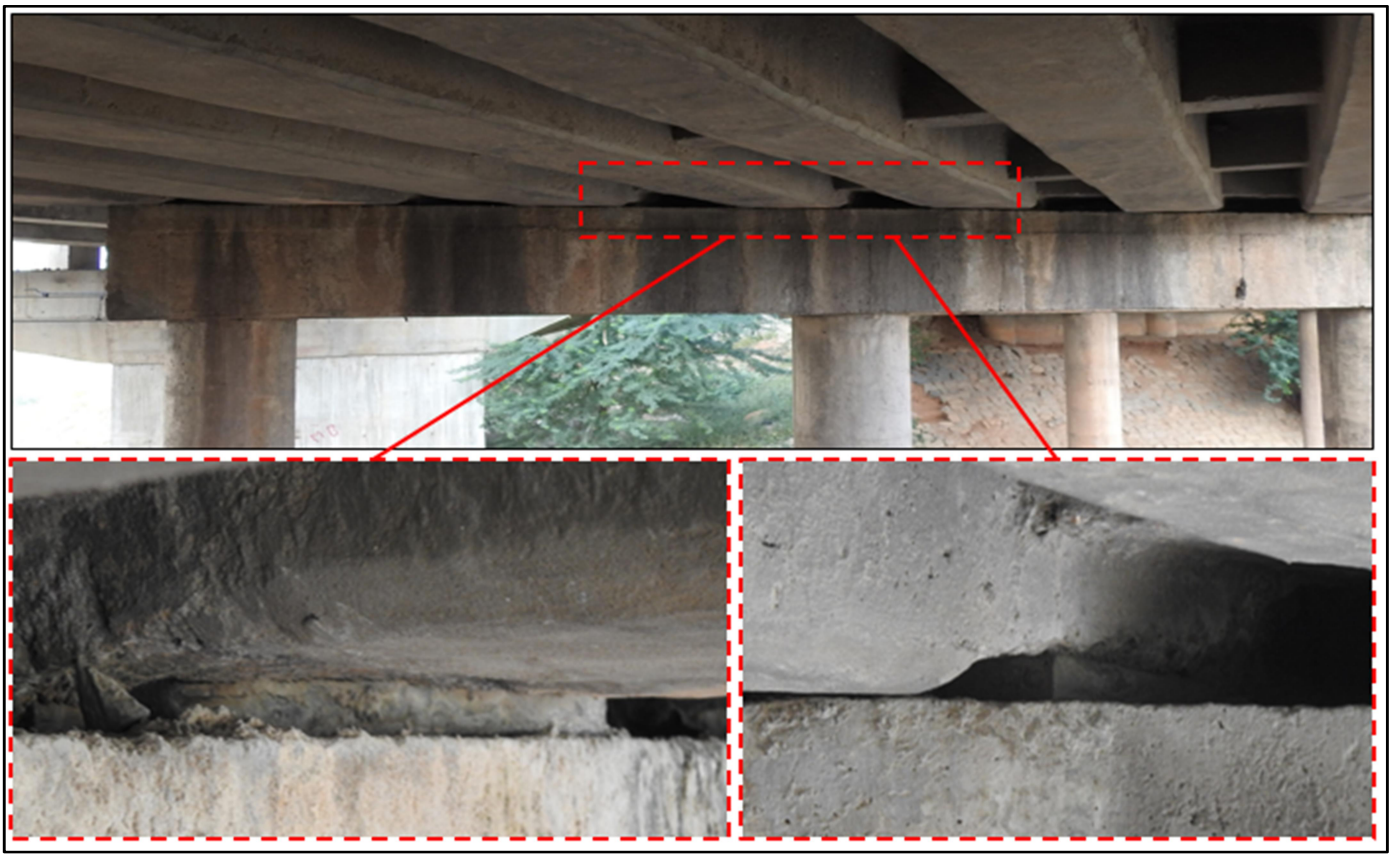


Fig.5: Distress in Elastomeric pad bearings



Fig.6: Structural Cracks, spalling, Reinforcement exposure and patches observed at overhang portion of slab



Fig.7: Leaching is observed at overhang portion of slab

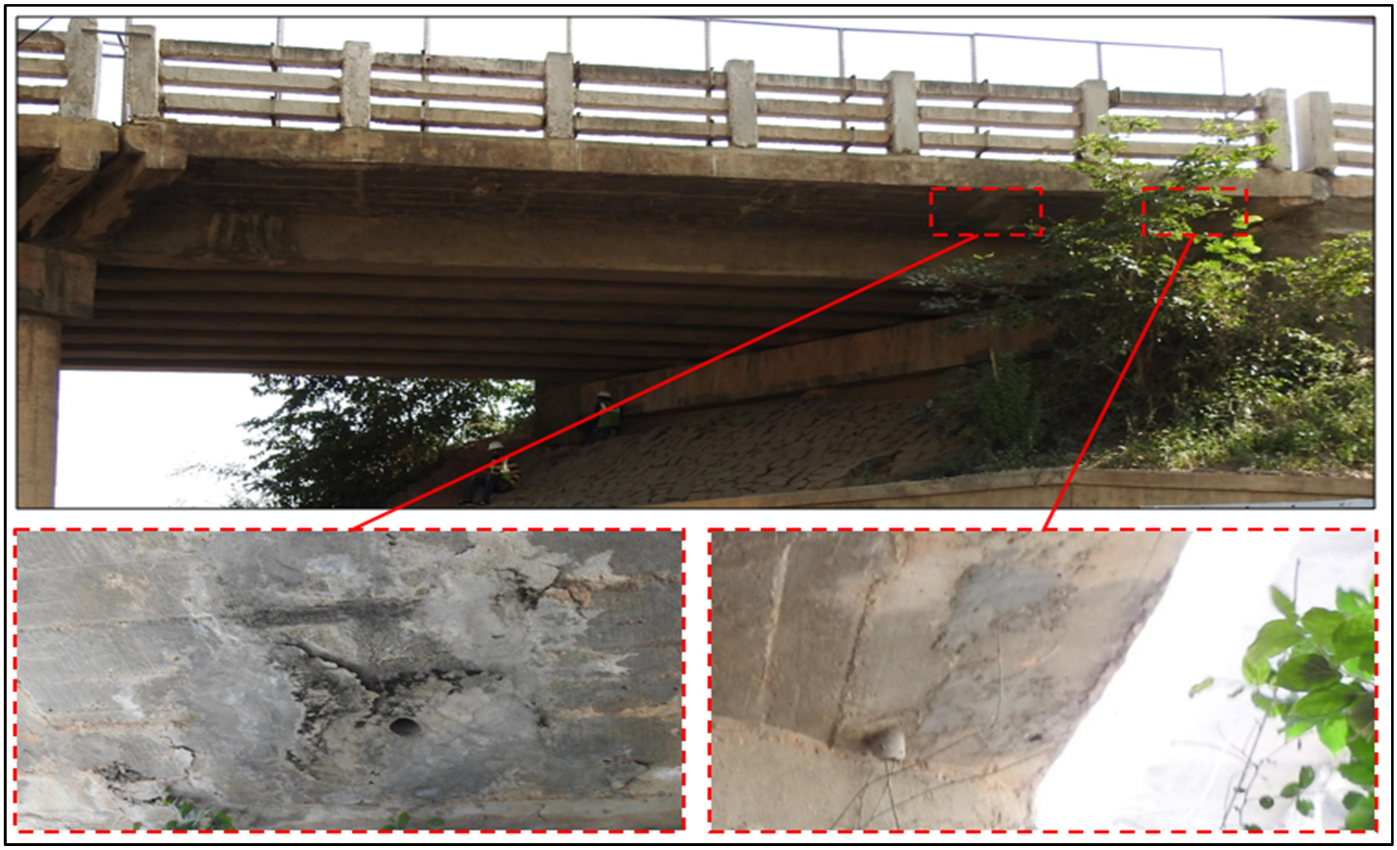


Fig.8: Spalling, Reinforcement exposure and patches is observed at overhang portion of slab in Span-1 near drainage spout.



Fig.9: Cracks are observed at the end of Longitudinal Girder



Fig.10: Wearing coat of the Bridge