Name of the Project	:	**VISUAL INSPECTION OF ROB No 372A**
Location	:	**NEAR PADUGUPADU RAILWAY STATION**
Location Co-ordinates	:	**14°30'42.3"N 79°59'28.2"E**
Date of Inspection	:	**28th November, 2019**



Summary:

a) Structural Cracks have been observed in the Pier shafts & caps.
b) Spalling and Reinforcement exposure is observed at the Abutments, Piers and drainage spout locations in the slab bottom.
c) Cracks also observed at slab & Crash barrier.
d) Leaching is observed at drainage spout locations in slab bottom.

Tests to be conducted:

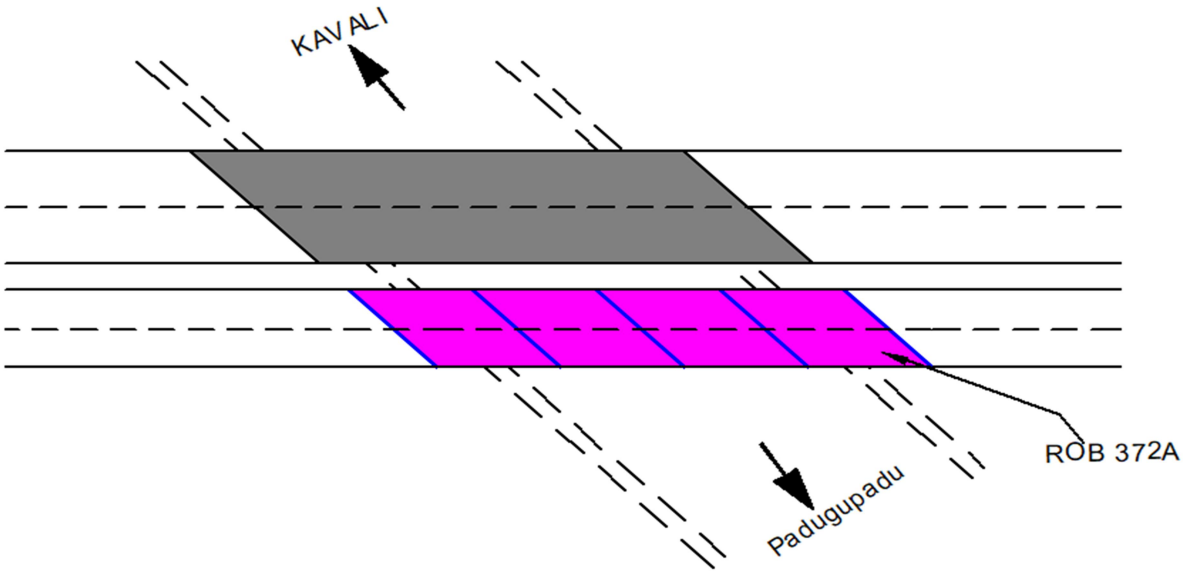
a) Rebound Hammer test to measure surface strength of the concrete.
b) Ultrasonic Pulse Velocity (UPV) Test to determine the Quality of concrete, such as uniformity and homogeneity of concrete, location of internal defects in concrete, porosity.
c) Profometer Test for the concrete cover and diameter 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.
g) Tests for Carbonation, pH and Chloride Content to determine the extent of chemical attack on concrete.

VISUAL INSPECTION OF ROAD OVER BRIDGE

Name of the Project	Visual inspection of ROB No 372A
Location	Near Padugupadu Railway station
Date of Inspection	28th November, 2019.

PART 1 GENERAL INFORMATION AND OBSERVATION		
1.1	Name of the Bridge	ROB No 372A
1.2	Location Location co-ordinates	Near Padugupadu Railway Station (372A) 14°30'42.3"N 79°59'28.2"E
1.3	Type of Bridge	RCC Slab Bridge
1.4	Year of Construction	Data Not Available
1.5	Grade of Concrete (Slab)	Data Not Available
1.6	Design Load	Data Not Available
1.7	Carriageway Width	7.5 m
1.8	Overall Deck Width	8.5 m
1.9	Average Skew	45^0
1.10	Span arrangement (no x Span in meters)	4x 8.5 m
1.11	No of Railway Lines Crossings	2 tracks
1.12	Vertical Clearance (from rail top to girder bottom)	5.34 m
1.13	History of Repair/ Maintenance	Patch work observed
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	RCC Wall type	
	Maximum height of Abutment from Ground level	5.28 m	
	Abutment width along the Track	13.4 m	
	Abutment thickness	2.2 m	
	Condition (Crack, Settlement, Scour, Tilting, Steel Corrosion, Strains and other damages etc...)		Spalling & Cracks are observed at abutment & retaining wall. (Refer Fig-4a)
	Efficiency of drainage of backfill Behind Abutments (Check functioning of weep holes, evidence of moisture on Abutment faces, etc.)		Weep holes are in dry condition.
2.3	**Pier**	03 Nos.	
	Type (Shape)	Wall	Spalling, Reinforcement exposure & Cracks are observed at Pier shafts and pier caps. (Refer Fig-4b, 4c, 4d, 4e, 4f) Rails are provided (Refer Fig-4e)
	Material	RCC	
	No. of Piers in a row/column	01	
	Maximum Height of Pier	5.1 m	
	Pier Diameter/Dimension	0.6 m	
	Pier Cap Material	RCC	
	Pier Cap Condition	Cracks & Spalling Observed	
	Pier Condition (Crack, Settlement, Scour, Tilting, Steel Corrosion, Strains and other Damages etc...)	Cracks, Spalling & Reinforcement exposure Observed	

2.4	**Bearing & Pedestal**		
	Type of Bearings	No bearings provided	
	General condition (Check Corrosion, cleanliness, seizing of plates silting, accumulations of dirt in case of submersible bridges)		
	Type/ shape of Pedestal	No Pedestals Provided	
	General condition (Check Corrosion, cleanliness, seizing of plates silting)		
2.5	**Super Structure (Concrete Girder)**	Slab	
	Type/Shape of Girder (I-beam, box-Girder etc.)		
	Material of Girder		
	No of Girder		
	Dimensions of Girder		
	Structural System of Bridge		Simply Supported
	Condition of Girder		
	Type/Shape of Secondary Girder		
	Material of Secondary Girder		
	No of Secondary Girders		
	Condition of Secondary Girder		
2.6	**Slab**		
	Material of Slab	RCC	
	Thickness of Slab	0.55 m	
	Condition of Slab from Bottom		Spalling, Leaching & Cracks Observed. (Refer Fig-5&6)
	Condition of Slab from Top		Not visible, as covered with wearing coat
	Condition of Flooring/Wearing Coat	Fair	
	Parapet wall/Railing		
	Type of Parapet wall/Railing	RCC Crash Barrier	
	Height	1.1 m	
	Condition of Wall/Railing		Cracks and honeycombing observed (Refer Fig-4a)

PART 3 SURVEY OF SIGNS OF DISTRESS, DEFORMATION IN BRIDGES			
	Defects	**Location**	**Note**
	Cracking in RCC components	Abutments, Piers and Slab	Cracks are observed in Abutments, Piers and Slab
	Water seepage		Water Seepage not observed
	Spalling	Abutments, Piers and Slab	Spalling observed in Abutments, Piers and Slab
	Reinforcement Exposure	Abutments, Piers and Slab	Spalling observed in Abutments, Piers and Slab



Fig: 1 View of ROB



Fig: 2 Abutment (A1 and A2)



Fig: 3 *B*ottom view of Slab



Fig 4(a): Cracks on abutment A1 retaining wall and Crash Barrier



Fig 4(b): Cracks and reinforcement on pier



Fig 4(c): cracks and patch work on pier



Fig 4(d): Cracks and vegetation on top of the pier





Fig 4(e): Cracks, Spalling and reinforcement exposed in pier



Fig 4(f): Patchwork and cracks in pier





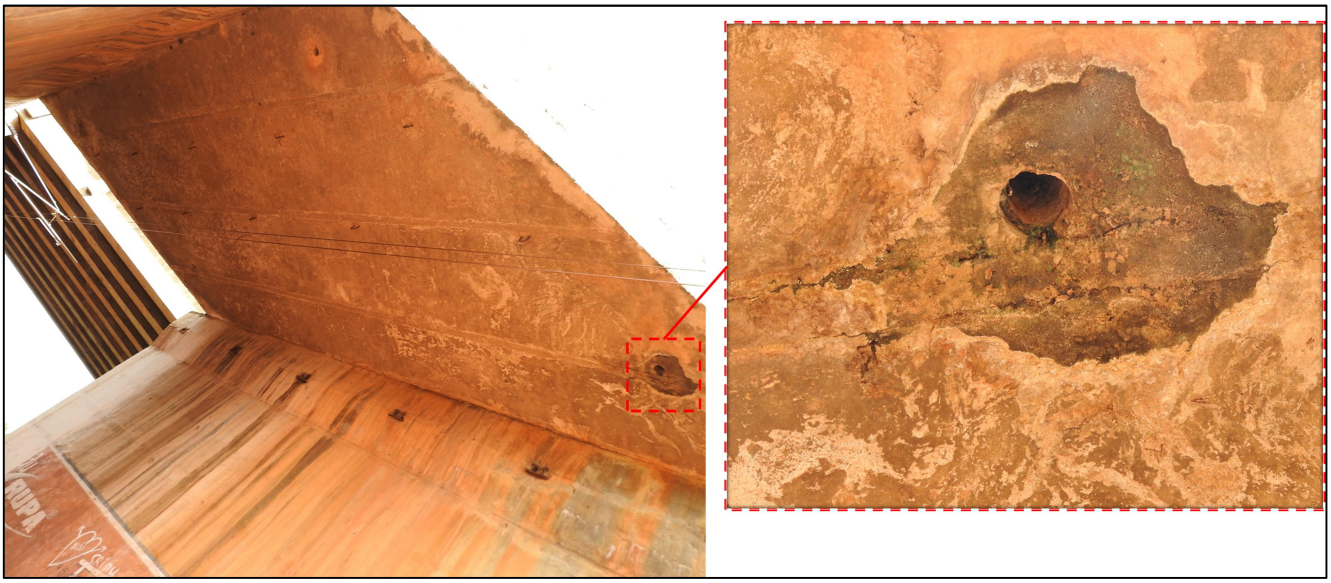


Fig 5: Spalling, Leaching observed at drainage spout location in slab bottom



Fig 6: Patch work observed in bottom of slab



Fig 7: Spalling & Leaching at Retaining wall Joint



Fig 8: Condition of Crash Barrier and Wearing Coat