

Name of the Project	:	VISUAL INSPECTION OF ROB-378
Location	:	NEAR MALLIAL
Location Co-ordinates	:	18°39'01.3"N 78°56'08.6"E
Date of Inspection	:	30th NOVEMBER, 2019



Summary:

- a) Minor spalling and Reinforcement exposed at overhang portion of slab
- b) Minor reinforcement exposed at Cross girders
- c) Leaching and algae formation is observed at Abutments
- d) Leaching is also observed at Slab.
- e) Vegetation growth is observed at Abutment

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.

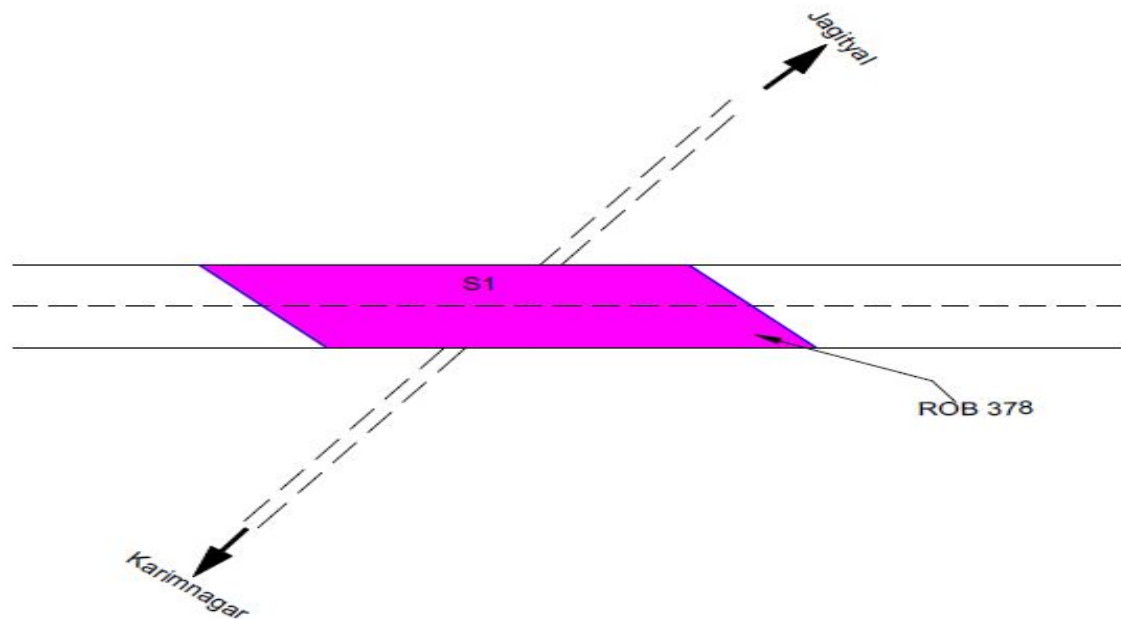
VISUAL INSPECTION OF ROAD OVER BRIDGE

Name of the Project	Visual inspection of ROB 378
Location	Near Mallial
Date of Inspection	30th November, 2019

PART 1 GENERAL INFORMATION AND OBSERVATION

1.1	Name of the Bridge	ROB 378
1.2	Location Location co-ordinates	Near Kondagattu 18°39'01.3"N 78°56'08.6"E
1.3	Type of Bridge	RCC 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	7.6 m
1.8	Overall Deck Width	10.9 m
1.9	Average Skew	32°
1.10	Span arrangement (no x Span in meters)	1 x 17 m
1.11	No of Railway Lines Crossings	1 track
1.12	Vertical Clearance (from rail top to girder bottom)	8.6 m
1.13	Horizontal Clearance (Pole to Rail track)	2.8 m
1.14	History of Repair/ Maintenance	Not visible
1.15	Original Structural Drawings	Not available

1.16 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	
	Maximum height of Abutment from Ground level	8.9 m	
	Abutment width along the Track	14.2 m	
	Abutment thickness	Not accessible	
	Condition (Crack, Settlement, Scour, Tilting, Steel Corrosion, Strains and other damages etc...)	Leaching observed.	Leaching and algae formation observed (Refer Fig-5)
	Efficiency of drainage of backfill Behind Abutments (Check functioning of weep holes, evidence of moisture on Abutment faces, etc.)	Good	Weep holes functioning properly.

2.3	Pier		
	Type (Shape)		There is no Pier, as bridge is having only one span.
	Material		
	No. of Piers in a row/column		
	Maximum Height of Pier		
	Pier Diameter/Dimension		
	Pier Cap Material		
	Pier Cap Condition		
	Pier Condition (Crack, Settlement, Scour, Tilting, Steel Corrosion, Strains and other Damages etc...)		
2.4	Bearing & Pedestal		
	Type of Bearings	Elastomeric bearing	
	General condition (Check Corrosion, cleanliness, seizing of plates silting, accumulations of dirt in case of submersible bridges)		Bearings distressed (Refer Fig-8)
	Type/ shape of Pedestal		No pedestal observed
	General condition (Check Corrosion, cleanliness, seizing of plates silting)		
2.5	Super Structure (Concrete Girder)		
	Type/Shape of Girder (I-beam, box-	I-Girder	
	Material of Girder	PSC	
	No of Girder	03 Nos.	
	Dimensions of Girder	1.6 x 0.6m	
	Structural System of Girder		Simply Supported
	Condition of Girder		Minor Leaching has been observed
	Type/Shape of Secondary Girder	Rectangular	
	Material of Secondary Girder	RCC	
	No of Secondary Girders	5 Nos.	

	Condition of Secondary Girder		Reinforcement visible. (Refer Fig-7)
2.6	Slab		
	Material of Slab	RCC	
	Thickness of Slab	250mm	
	Condition of Slab from Bottom		Leaching and Reinforcement visible due to less cover at overhang portion of slab.
	Condition of Slab from Top		Not visible, as covered with wearing coat
	Condition of Flooring/Wearing Coat		Fair condition (Refer Fig-10)
	Parapet wall/Railing		
	Type of Parapet wall/Railing	RCC wall	
	Height	1.95 m	
	Condition of Wall/Railing		No Accidental hit marks are observed on wall (Refer Fig-10)

PART 3 SURVEY OF SIGNS OF DISTRESS, DEFORMATION IN BRIDGES			
	Defects	Location	Notes
	Cracking in RCC components		No Cracks are observed.
	Water seepage		No water seepage is observed during visual inspection.
	Leaching	Slab, Abutment	Leaching and algae formation observed
	Spalling	Slab	Minor spalling is observed.
	Reinforcement Exposure	Slab, Cross girder	Minor Reinforcement Exposure is observed.



Fig: 1 Front View of ROB



Fig: 2 Abutments (A1 and A2)



Fig: 3 Bottom view of Bridge



Fig 4: Reinforcement visible at overhang portion of slab



Fig 5: Leaching and algae formation observed at Abutment



Fig 6: Leaching observed at overhang portion of Slab



Fig 7: Reinforcement visible at Cross girders



Fig 8: Bearing details



Fig 9: Vegetation observed at abutments



Fig 10: Road surface & Parapet wall