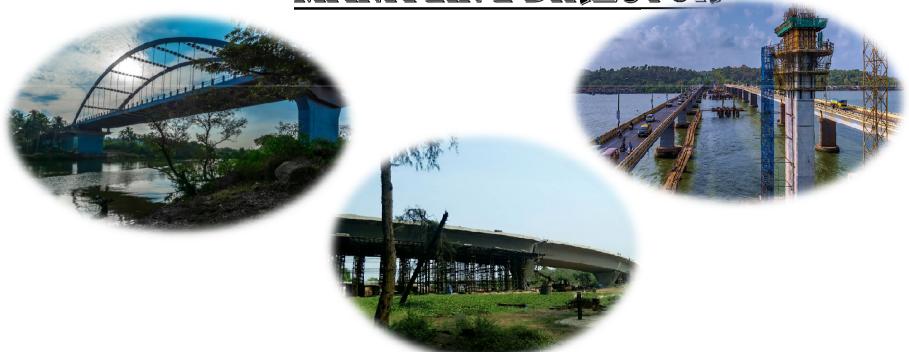


# BRIDGE SURVEY & INSPECTION WORKSHOP ON 25.08.2016 AT PUNE

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MANAGING DIRECTOR



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#### **Relevant IRC Codes:-**

IRC: SP – 18 – 1978/1990 Manual for Highway Bridge Maintenance.

IRC: SP – 35 – 1990 Guidelines for Inspection & Maintenance of Bridges.

IRC: SP – 37 – 1991/2010 Guidelines for evaluation of load carrying capacity of Bridges.

IRC: SP – 40 – 1993 Guidelines on techniques for strengthening & Rehabilitation of Bridges.

IRC: SP – 52 – 1993 Bridge Inspectors Reference Manual.

IRC: SP – 60 – 2002 Approach document for assessment of remaining life of concrete bridges.

IRC: SP – 74 – 2007 Guidelines for Repair and Rehabilitation of Steel Bridges.

IRC: SP – 75 – 2008 Guidelines for Retrofitting of Steel Bridges by Prestressing.

IRC: SP – 80 – 2008 Guidelines for Corrosion Prevention, Monitoring and Remedial Measures for Concrete Bridge Structures.



### BASIC STEPS THAT ARE NEEDED

- O INVENTORY
- O VISUAL SURVEY
- O CONDITION SURVEY
- OSTRUCTURAL AUDIT???



# INVENTORY

#### **Inventory Problems:-**

- No System available.
- No Central Database available which needs to be created. [(can be on MoRTH basis)
- Unique id's generation



# VISUAL SURVEY/CONDITION SURVEY

#### Visual Survey/Condition Survey:-

- Foundations inaccessible / not inspectable.
- Substructure under water & cannot be inspected.
- Underside of bridges is inaccessible in many cases.
- ➤ Wearing surface makes it impossible to identify surface cracking on top of slab.
- Bearings inaccessible.
- ➤ To make stability assessments based on these surveys is nearly impossible.





## STRUCTURAL AUDIT

#### **Structural Audits:-**

- 1) What is structural audit?
- 2)IRC does not define Structural Audit!!!
- 3)Structural Audit
  - Design & Drawings Review
  - Modification / Rectification / Repair & Rehabilitation - Review
  - > NDT as required
  - Load rating based on actual condition of bridge

#### **Problems:-**

- Abuse of structures (Ads on mandatory long spans)
- Blockage of spouts leading to ponding & corrosion
- Overloading
- Mastic Cookers heat exposure on slabs
- ❖ Lack of infrastructure for load rating & if done, monitoring & policing the same is difficult

#### Lack of correct data or availability:-

☐ Hydrological Surveys.
☐ Flood data.
☐ River data.
☐ Traffic & Load data.
☐ Maintenance records.
☐ Repair & Rehabilitation data & records.
☐ Modification to Structure data.



























