

BRIDGE SURVEY & INSPECTION WORKSHOP ON 25.08.2016 AT PUNE

MR. ATUL BHOBE
MANAGING DIRECTOR



S. N. BHOBE & ASSOCIATES Pvt. Ltd. 4th Floor, Pudhari Bhavan, Sector – 30A, Near Sanpada Railway Station, Vashi, Navi Mumbai – 400 705, INDIA

www.snbapl.com – www.tpf.eu

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

- INVENTORY
- VISUAL SURVEY
- CONDITION SURVEY
- STRUCTURAL AUDIT???

INVENTORY

Inventory Problems:-

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

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.









