

2013 Midwest Bridge Preservation Partnership Indianapolis, Indiana

Balancing Preservation with Realistic
Strategies: (When Preservation is No
Longer Effective)



Not Enough Funds

Example of Where Preservation Activity is Warranted

Bridges built in 80's, small portion of expansion joint leaking, NBI ratings for deck, superstructure, and substructure are still 7 or more which is considered to be good condition



Only one bay is leaking



Armoring needs to be replaced

Bridges Built in 80's

**Recommended Preservation activities:
Seal Joints, apply deck sealer, washing
and painting as needed**

- (1) Epoxy rebar and prior sealer application
(Bridge deck life projected to last over 50
years without repair)**
- (2) No functional issues**
- (3) No strength issues**
- (4) High ADTT**
- (5) Long detour length**

Note epoxy / sealer policy started in 1980

Example of Where Preservation Activity is not Warranted

Bridges which have various combinations of functional issues (vertical and horizontal clearances), metal fatigue, strength, and poor condition (section loss).



Limited clearances



Metal fatigue cracks due to square coping

Problem Bridges

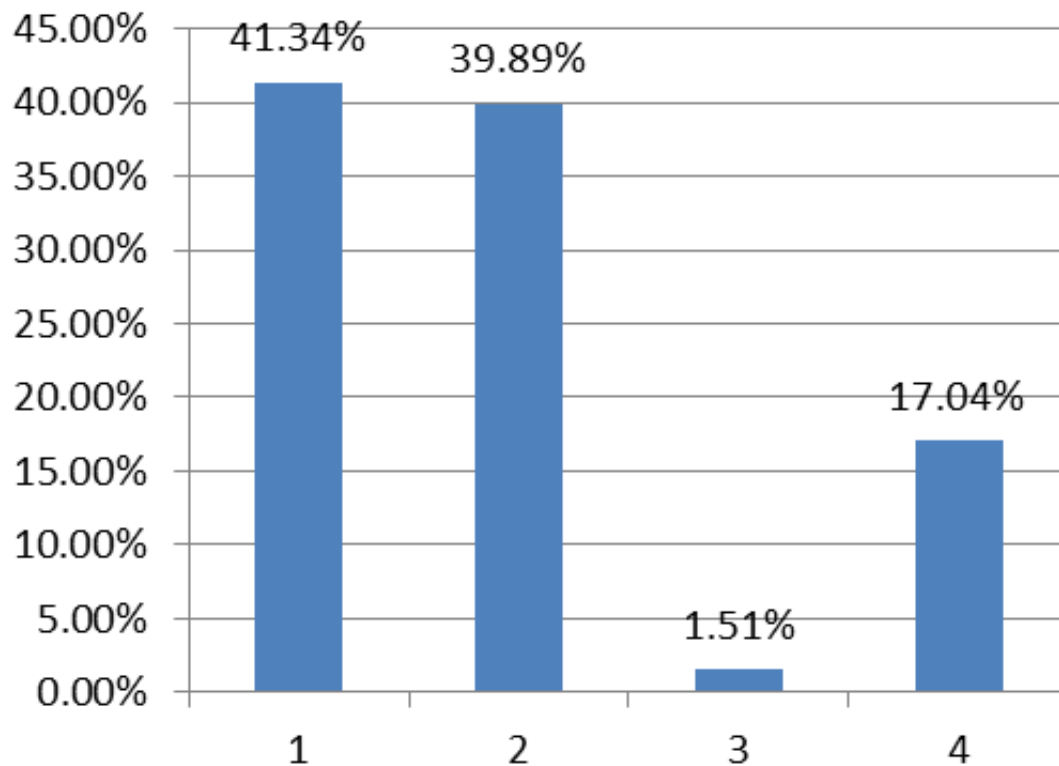
Recommended Preservation activities:

NONE: Replace

- (1) Numerous deck patches**
- (2) Vertical and/or horizontal clearance issues**
- (3) Strength issues**
- (4) Metal Fatigue**
- (5) Condition issues (section loss)**

Expansion Joints on Bridges Built in the 80's

Expansion Joints Built in 80's



PONTIS condition
state 1 is the best

■ PONTIS
Condition
State

Due to under reporting, We estimate that as many as 60% of the joints could be leaking.



Dilemma: Funding is targeting Structurally Deficient Bridges

- (1) Delaying preservation activities on bridges built in the 80's places beam ends and substructure elements at risk**
- (2) Doing preservation activities on structurally deficient bridges is ineffective and a waste of funds (replacement or rehabilitation is preferred to preservation)**
- (3) There is a need to Balance Preservation needs with Realistic Strategies with rehabilitation and replacement – Funding is Limited**



Discussion

How does your State address joints?