FHWA – Bridge Preservation Guide

Early/Continual

Bridge Preservation

Preventive Maintenance

Cyclical (Non-Condition Based) Activities

Condition Based Activities

Rehabilitation

Late
FHWA – Bridge Preservation Guide

Preventive Maintenance

- Deck overlays
  - EPO
  - Acc+M
- Joints
  - End of Floor
  - Pin/Hanger
  - Grade Beam
- Piles
  - Abutments (Chloride Zone)
  - Wet/Dry Zone
- Painting
  - Girders
  - Bearings
Nebraska Preservation

- Design with preservation in mind
- Jointless bridges
- Deck protection on good decks
- Old way of doing business
- New ideas
- One Deck for Life
Well-Timed Preservation

**ONE DECK FOR LIFE**

- Re-decking NU Girders will be challenging
Well-Timed Preservation

CASE STUDY

SL51A00068 – Brule, NE over Platte River
Built – 1934
Widened/Lengthened – 1974
Well-Timed Preservation

CASE STUDY

SL51A00068 – Brule, NE over Platte River
Built – 1934
Widened/Lengthened – 1974
Well-Timed Preservation

CASE STUDY

SL51A00068 – Brule, NE over Platte River
Built – 1934
Widened/Lengthened – 1974
Well-Timed Preservation

CASE STUDY

SL51A00068 – Brule, NE over Platte River
Built – 1934
Widened/Lengthened – 1974

Only deck area deteriorated is along the deck edge
Well-Timed Preservation

CASE STUDY

SL51A00068 – Brule, NE over Platte River
Built – 1934
Widened/Lengthened – 1974

Original Deck Region
Well-Timed Preservation

CASE STUDY

SL51A00068 – Brule, NE over Platte River
Built – 1934
Widened/Lengthened – 1974

Widened Deck Region
Well-Timed Preservation

**ONE DECK FOR LIFE**

- 1970’s – 26 bridges built with Fabric Membrane
Well-Timed Preservation

**ONE DECK FOR LIFE**

- 1970’s – 26 bridges built with Fabric Membrane
Preservation – Bridge Decks

Deck Overlays - EPO
Preservation – Bridge Decks

Deck Overlays – Fabric Membrane, Option 1
Preservation – Bridge Decks

Deck Overlays – Fabric Membrane, Option 2
2-ply fabric w/ PG Binder
Preservation – Bridge Decks

Deck Overlays – Liquid Membrane
Preservation – Bridge Decks

Deck Overlays – Asphalt Placement
Well-Timed Preservation

Joints – Asphalt Plug
Well-Timed Preservation

Joints – Polymer Nosing
Preservation – Bridge Decks

Deck Overlays – Membrane Candidate
Preservation – Bridge Decks

Deck Overlays – Membrane Candidate

Tining Depth Gage – Determine Extent of Deck Prep.
Preservation – Joints and Bearings

Joints
Preservation – Joints and Bearings

Joints
Preservation – Joints and Bearings

Joints
Preservation – Joints and Bearings

Joints
# Well-Timed Preservation

## Joints – Started collecting Element Data in 2014

<table>
<thead>
<tr>
<th>Defects</th>
<th>Condition States</th>
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<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>GOOD</td>
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<tr>
<td>Leakage (2310)</td>
<td>None.</td>
</tr>
<tr>
<td>Seal Adhesion (2320)</td>
<td>Fully adhered.</td>
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<tr>
<td>Seal Damage (2330)</td>
<td>None.</td>
</tr>
<tr>
<td>Seal Cracking (2340)</td>
<td>None.</td>
</tr>
</tbody>
</table>
Well-Timed Preservation

Paint Bearings
Well-Timed Preservation

Turndowns & Approaches
Preservation - Piling

Piles
Preservation - Piling

Piles
Well-Timed Preservation

**ONE DECK FOR LIFE**

- Membrane on New Bridges
Questions?