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Federal-aid Program Overview

Bridge Preservation

www.fhwa.dot.gov/federal-aidessentials

Bridge Preservation Strategies for Operations Staff.



Does your agency recognize that preventive maintenance programs increase the useful life of bridges? Even if it does, most operational staff will say that reactive repairs and bridge closures dominate their daily priorities. And if responding to these complaints is done at the expense of essential preventive tasks, such as removing debris or sealing or replacing leaking joints, new and more costly problems will soon develop— making you feel like you are running in circles.

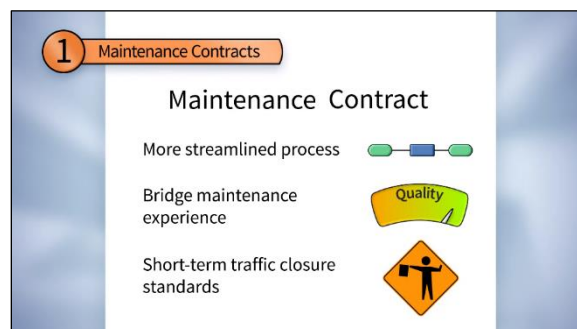


To gain forward momentum, operational staff at State and local levels are starting to develop innovative approaches to tackling the problem of deferred maintenance with some encouraging results.

How about your agency? Are you analyzing and piloting new approaches to maintenance, or is it business as usual and at what impact to the inventory of bridges over time?

Here we'll look at three strategies for adding preventive maintenance to your work routine and follow one maintenance department as it develops its own pilot program.

As our first strategy, consider implementing short-term maintenance contracts to perform bridge preservation activities rather than long-term construction contracts. Maintenance contracts have several advantages.

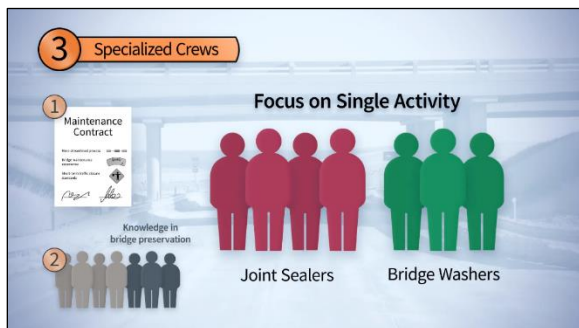


First, they allow agencies to follow a more streamlined process for preparing and letting bids which are managed by maintenance field staff. By using experienced bridge maintenance workers to manage maintenance contracts, agencies can expand their capacity for bridge preservation activities and better control job quality. Additionally, short term traffic closures standards can be applied to these smaller contracts which result in less impact on traffic flow.

As an alternative to contracting, consider developing a crew of bridge preservation experts who are knowledgeable in general preservation strategies and the extensive details of bridge preservation work. If you're wondering where your department is going to find the time and money for training and development, look to your State Department of Transportation, and the Federal Highway Administration for guidance, or contact your Local Technical Assistance Program, or LTAP. LTAPs provide practical access to training at low- to no-cost to your agency.



And lastly, as an alternative to developing a general crew of bridge preservation experts, consider creating specialized work crews that focus on a single preservation activity, such as joint sealing or bridge washing. The division of labor among crews can increase efficiency and result in the completion of more preservation work.



The American Association of State Highway and Transportation Officials, or AASHTO, places an emphasis on bridge preservation activities for

bridges. AASHTO has established a Transportation System Preservation Technical Service Program, or TSP2, to support bridge preservation activities, which includes informal peer groups.

Let's follow the experience of an agency's maintenance department as it utilizes a peer group and moves forward with an efficient use of bridge funds.



While attending the annual meeting of a Bridge Preservation Peer Group, Greenville County's bridge maintenance engineer learned that nearby St. Clair County had recently piloted a new contracting process. St. Clair's new bridge deck sealing contract gave the agency flexibility when scheduling the work. By focusing work on single corridors, St. Clair County reduced both the cost of traffic control and inconvenience to the public.

Impressed with the results at St. Clair County, Greenville County's bridge management engineer collaborated with Greenville's maintenance supervisor to evaluate a similar strategy at their agency. Together, they demonstrated to county leadership that a maintenance contract with flexible scheduling would likely result in more timely bridge preservation activities and an anticipated improvement in the overall bridge network condition over time. County leadership approved the proposed plan and allocated the funding for a pilot program.



The success with a new contracting process has led the bridge management engineer and maintenance supervisor to develop additional plans to improve the useful life of the bridge network within their jurisdiction. They intend to:

- Research additional innovative and cost-effective ways to preserve bridge conditions from the AASHTO website;
- Analyze the cost and benefit to the bridge network of various strategies over time; and
- Make further recommendations and proposals for funding to county leadership.

The bridge maintenance engineer is optimistic this proposed approach will reduce reactive repairs and bridge closures over time.



Our example illustrates the benefits of:

- Participating in the Bridge Preservation Peer Group or other professional associations;
- Tracking and evaluating results; and
- Communicating your organization's role in solving the problem of deferred maintenance.

Does your maintenance department already have a bridge preservation program in place? If not, reach out to peer agencies who have successfully implemented a program to see how they got started. Planning for and applying preservation activities as a regular part of your maintenance work can keep you moving forward with limited budgets and keep your bridges in better shape.

Additional Resources

The FHWA Bridge Preservation Guide - dated Spring 2018.

<https://www.fhwa.dot.gov/bridge/preservation/guide/guide.pdf>

FHWA Bridges & Structures bridge preservation website with links to preservation guidance, training classes, and other resources.

<https://www.fhwa.dot.gov/bridge/preservation/>

The FHWA and State DOT sponsored Local Technology Assistance Programs (LTAP) provide support to local agencies for their Road and Highway programs.

<https://www.fhwa.dot.gov/clas/ltap/>

FHWA Guidance memo on preservation of highway infrastructure.

<https://www.fhwa.dot.gov/preservation/memos/160225.cfm>

FHWA program policy and guidance center website with information for bridge program.

<https://www.fhwa.dot.gov/pgc/index.cfm?ddisc=110>

AASHTO TC3 is a technical services program that is focused on the web-based training. These trainings are free to AASHTO member states that financially contribute. They are also available to local agencies for free through the FHWA's LTAP and TTAP programs. Currently, they offer 4 specific trainings on the Bridge Preservation Guide; Thin-Polymer Bridge Deck Overlay Systems; Bridge Cleaning; and Removal and Replacement of Bridge Coatings.

<https://store.transportation.org/>

The content of this document is not a substitute for information obtained from State departments of transportation, appropriate FHWA Division Offices, and applicable laws. Scenarios have been simplified for emphasis and do not necessarily reflect the actual range of requirements applicable to the scenario or this topic. This document was created under contract number DTFH61-13-A-00001 by the Federal Highway Administration, U.S. Department of Transportation, and is offered to the public to heighten and focus awareness of Federal-aid requirements within the local public agencies community and reinforces the importance of these necessary policies, procedures, and practices.

This Companion Resource is the script content for the video production of the same name.