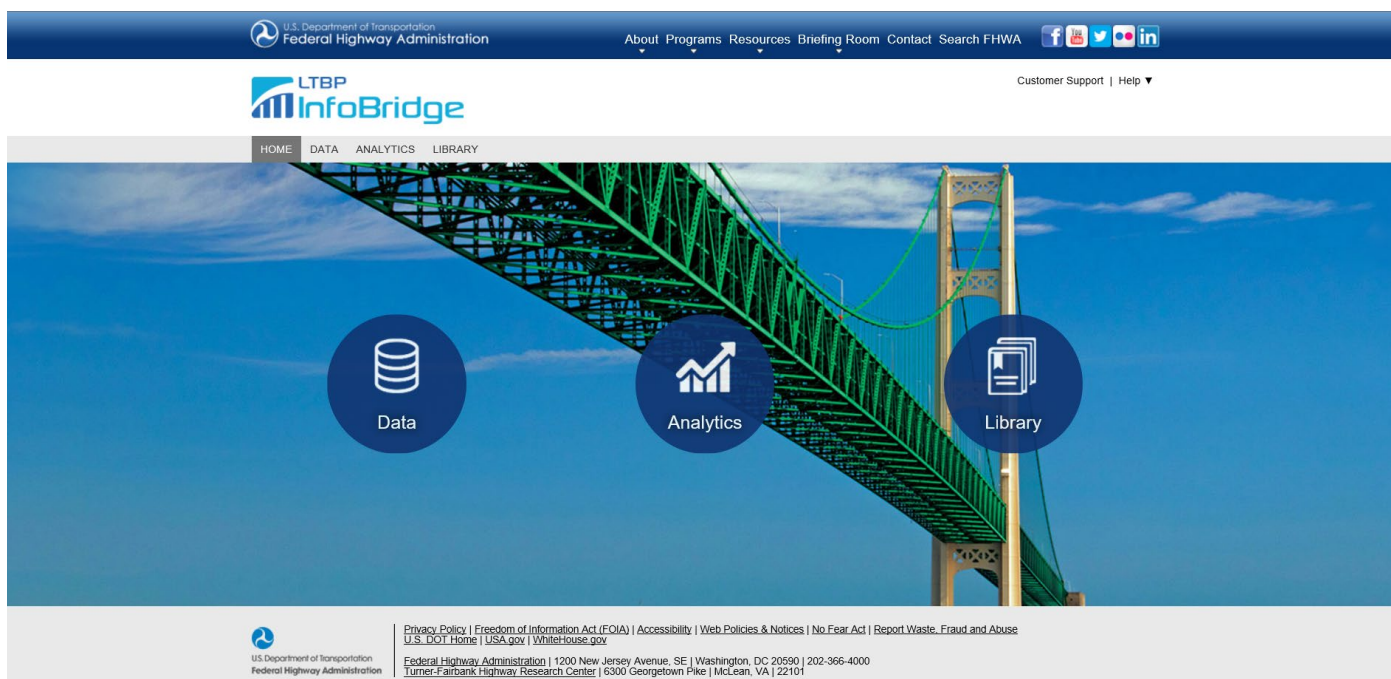




LTBP News

LTBP Releases InfoBridge™ Web Portal



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Source: FHWA

The LTBP InfoBridge™ web portal provides site users with a one-stop shop for accessing data, analytics, and a library of other LTBP resources.

January 2019 marked the release of the Long-Term Bridge Performance (LTBP) Program's InfoBridge™ web portal, a newly developed website for dissemination and visualization of bridge data, information, and products developed by the LTBP Program. The portal's main purpose is to leverage the analytical capability of the highway bridge research community, and fulfill the Federal Highway Administration's (FHWA's) responsibility to provide transparency and ready access to data collected through Federal research programs. InfoBridge™ also enables bridge owners with no or limited access to bridge asset management software to manage their bridge inventories through a seamless user interface that incorporates state-of-the-art querying and visualization tools.

The LTBP Program's goal is to make InfoBridge™ a comprehensive bridge performance portal, enabling researchers to develop tools and products that will enhance understanding of the performance of highway

bridge assets, and enabling anyone interested in bridge performance to access and explore the available information easily. It will ultimately lead to more efficient bridge design, construction, rehabilitation, maintenance, preservation, and management.

Major enhancements to InfoBridge™ are underway. They include augmenting the number of fields to query the data, improving charting capabilities, and implementing bridge deck deterioration models. In addition to regularly enhancing and updating the web portal with National Bridge Inventory (NBI) data and the research-quality data collected by the LTBP Program, FHWA will continue to explore the incorporation of data collected by others when appropriate.

The LTBP InfoBridge™ web portal can be accessed at <https://infobridge.fhwa.dot.gov/>.

LTIP Team Demonstrates InfoBridge™ at County Highway Superintendents Conference



Source: Greg Yavra

Live Demo of InfoBridge™ at the South Dakota County Highway Superintendents Annual Conference.

FHWA’s South Dakota Division and the South Dakota Department of Transportation (SDDOT) partnered with members of the Long-Term Infrastructure Performance (LTIP) Team, including Ms. Deborah Walker, Dr. Jean Nehme, and Dr. Robert Zobel. The team provided a live demo of InfoBridge™ at the 2019 annual conference of the South Dakota Association of County Highway Superintendents. The demo was given to 255 attendees to showcase the different features of the web portal and how the State and Local Public Agencies (LPA) can use this invaluable tool to help with their daily bridge activities.

Dr. Nehme, LTIP Team Leader, provided an overview of InfoBridge™: its purpose, accessibility, key features, and benefits. Dr. Zobel gave a live demo, which was tailored for the South Dakota LPAs, to demonstrate the intuitive steps to access their NBI data and learn how to map, graph, retrieve, and export the data. Some of the examples demonstrated included creating a map of structures specific to a county; comparing bridge conditions of different counties in the State; and creating a report showing structure number, owner, posting status, condition ratings for deck, superstructure, substructure, and culverts (NBI items 58, 59, 60, 62), bridge condition (good, fair, poor), and how to export reports to Microsoft® Excel. Many LPAs do not have a bridge management tool to access their NBI data to aid in the management of their bridge inventory. LTBP InfoBridge™ provides this access.

“For years, I have been getting requests by LPAs for better access to their NBI data that is stored in our Bridge Management Software (BrM). We have tried multiple times using different methods—from Excel exports, to limited-viewer-only access, to BrM. These requests can take many hours of staff time due to the volume of bridge owners. InfoBridge™ has provided an interactive way of sharing data between county highway superintendents, engineers, commissioners, and the public.”

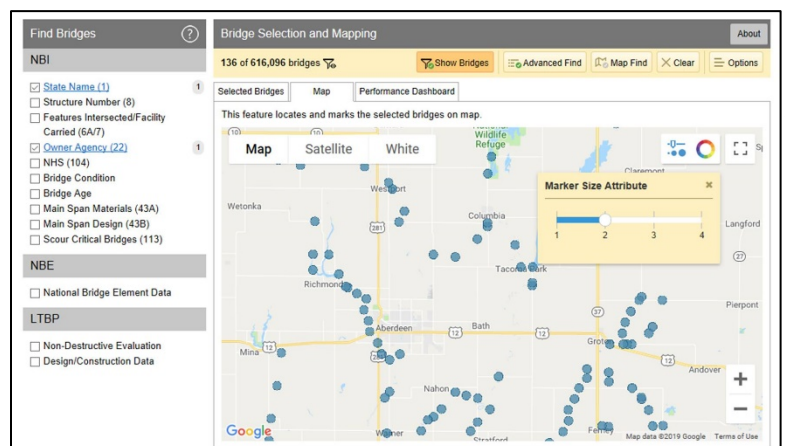
*Cody Axlund
Local Government Assistance Bridge Inspection Engineer
South Dakota Department of Transportation*

Attendees of the conference commented that InfoBridge™ will greatly help them in their daily bridge management activities and provide visual aids and data to work with their county commissioners.

InfoBridge™ will also aid LPAs when analyzing bridge data and determining which bridges merit funding requests for preservation, rehabilitation, or replacement under the South Dakota Bridge Improvement Grant Fund.

LTBP InfoBridge™ is a powerful tool to assist LPAs to manage their bridges.

Marc Hoelscher of the South Dakota Division Office and Cody Axlund of SDDOT are the contributing authors of this article and were instrumental in working with the members of the LTIP Team to make this demo possible.



Source: FHWA

Mapping of Bridge Locations in Brown County, South Dakota.

In Brief

LTBP Creating Probabilistic Bridge Deterioration Models for Bridge Decks

The LTBP Program is developing bridge deterioration models. One such model is focused on using historical NBI data to forecast future conditions of concrete bridge decks. Dr. Raka Goyal, a National Research Council (NRC) Research Associate working under the advisement of Dr. Nehme, is conducting research on using a combination of statistical analysis techniques, namely, survival analysis and Markov chain theory, to accomplish this task. Dr. Goyal developed similar deterioration models for the North Carolina State bridge inventory. Her probabilistic methodology integrates varying condition-state-duration-based influences of design, and functional and environmental factors on bridge component deterioration.

LTIP Welcomes New Team Members

The LTIP Team welcomed two new members over the past year. Dr. Ping Lu joined the LTIP Team as a Research Structural Engineer in November 2018.



Source: FHWA

Dr. Ping Lu joined the LTIP Team just in time for her first Transportation Research Board (TRB) appearance with FHWA (January 2019).

Prior to joining FHWA, Dr. Lu worked for the Iowa DOT for 10 years. She worked as a Bridge Designer, State Load Rating Engineer, and State Bridge Preservation Engineer. Dr. Lu served, for a one-year period, as the Associate Director for the Bridge Engineering Center at Iowa State University. One of her major responsibilities

with the LTBP Program is to manage the further development of LTBP InfoBridge™.

Dr. Shri Bhide joined the LTIP Team as a Research Civil Engineer in April 2019. Dr. Bhide has over 25 years of professional experience in building and bridge engineering.



Source: FHWA

Dr. Shri Bhide joined the LTIP Team in April 2019.

He is past chairman of the National Concrete Bridge Council, and he is a registered Structural and Professional Engineer in several States.

Dr. Bhide’s responsibilities with the LTBP Program include documenting historical bridge specification changes, coleading the data collection activities, and communicating and collaborating with stakeholders.

LTBP to Present Session at 2020 TRB Annual Meeting

The LTBP session at the 2020 TRB Annual Meeting has received sponsorship from TRB’s Standing Committee on Structures Maintenance (AHD30), chaired by Professor George Hearn. The session will provide an update on the LTBP Program’s activities during 2019, and will feature presentations on how InfoBridge™ is being used for inventory management and in bridge engineering research and education. The final agenda will be available in fall 2019. Please plan to attend the session if you are in Washington, DC, for the meeting.

Publications

Reports:

[Gateway to Bridge Performance Information](#)

FHWA-HRT-19-009
December 2018 [[PDF](#)]

[A Comprehensive Laboratory Study of Metallic Reinforcing Steels for Corrosion Protection of Reinforced Concrete Bridge Structures](#)

FHWA-HRT-15-078
June 2018 [[PDF](#)]

[Laboratory Evaluation of Corrosion Resistance of Various Metallic Dowel Bars](#)

FHWA-HRT-15-079
June 2018 [[PDF](#)]

[FHWA LTBP Summary - Current Information on the Use of Overlays and Sealers](#)

FHWA-HRT-16-079
October 2017 [[PDF](#)]

[An FHWA Special Study: Post-Tensioning Tendon Grout Chloride Thresholds](#)

FHWA-HRT-14-040
March 2014 [[PDF](#)]

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