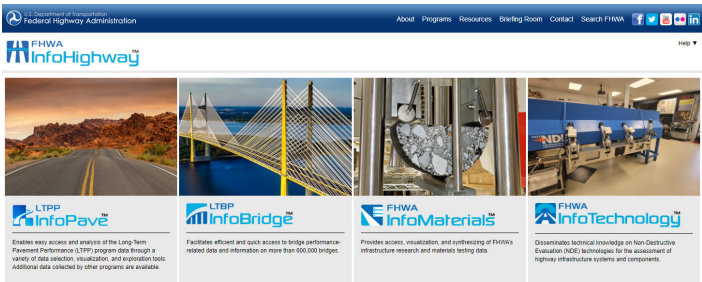




LONG-TERM BRIDGE PERFORMANCE (LTBP) NEWSLETTER

FEDERAL HIGHWAY ADMINISTRATION (FHWA) INFOHIGHWAY™ WEB PORTAL GOES LIVE

InfoHighway is FHWA’s Web portal, providing access to the various Info portals: Long-Term Pavement Performance (LTPP) InfoPave™, Long-Term Bridge Performance (LTBP) InfoBridge™, FHWA InfoMaterials™, and FHWA InfoTechnology™. Additional Info portals will soon be added to the site. Stay tuned.



Source: FHWA.

Figure 1. Screenshot. FHWA InfoHighway home screen.¹

WINNER OF THE 2022 STUDENT DATA ANALYSIS CONTEST

The LTBP committee selected one paper for the first-place award in the Bridge category of the 2022 Long-Term Infrastructure Performance (LTIP) Student Data analysis Contest. The student winner is Chan Yang from Rutgers University, First place (Bridge): “Correlation of Bridge Deck Deterioration with Truck Load Spectra Based on Weigh-in-Motion Data.”

The winner received an all-expenses paid trip to attend the 2023 Transportation Research Board (TRB) Annual Meeting in January. FHWA recognized Ms. Yang with an award certificate at the Long-Term Bridge Performance (LTBP) Lectern Session at TRB. Ms. Yang presented her paper at the LTBP session.

The LTIP Student Data Analysis Contest encourages students to use the LTPP Web portal, LTPP InfoPave, or the LTBP Web portal, InfoBridge, to address specific infrastructure issues or challenges. Entries for the 2023 contest are due August 1, 2023.

INFOBRIDGE: RECENT ENHANCEMENTS

The most recent version of InfoBridge, released in January 2023, includes several usability enhancements, tools, and products resulting from research performed by the LTBP program. For a complete list of new InfoBridge features and enhancements, visit [InfoBridge Update Notes](#). New InfoBridge highlights are as follows:

- **Bridge Condition Transition History**—The Bridge Condition Transition History tool in InfoBridge produces a list of bridges that have transitioned from one condition state to another over a user-specified period. In the Data menu, select the Performance History item, and then select the Bridge Condition Transition History tab to access the tool. The tool can also be accessed under the Tools menu.

The starting year selection is limited to the year from which InfoBridge maintains condition data for all bridges; in most cases this year is 1985. The tool generates a list of bridges that meet the user-specified requirements. The list includes a few pertinent National Bridge Inventory (NBI) items. The tool displays bridge condition as good, fair, or poor for each year of the specified duration. The list can be exported into a Microsoft® Excel® spreadsheet.

State Name	Structure Number	Owner Agency	Deck Area (sq. ft.)	Year Built	Main Span Material	Main Span Design	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Iowa	00000001035151	County Highway Agency	734.5	1990	Steel	Stringer-Multi-beam or Girder	F	F	F	F	F	F	F	F	F	F
Iowa	0000000175821	County Highway Agency	1,033.9	1977	Prestressed Concrete	Tea Beam	F	F	F	F	F	F	F	F	F	F
Iowa	00000001190271	County Highway Agency	1,840.9	1980	Steel	Stringer-Multi-beam or Girder	F	F	F	F	F	F	F	F	F	F
Iowa	00000001109010	County Highway Agency	1,231.6	1967	Steel	Stringer-Multi-beam or Girder	F	F	F	F	F	F	F	F	F	F
Iowa	0000000104340	County Highway Agency	19,405.5	1999	Steel Continuous	Stringer-Multi-beam or Girder	F	F	F	F	F	F	F	F	F	F
Iowa	00000001022015	County Highway Agency	738.0	1990	Concrete Continuous	Culvert	F	F	F	F	F	F	F	F	F	F
Iowa	0000000144020	County Highway Agency	609.3	1941	Steel	Stringer-Multi-beam or Girder	F	F	F	F	F	F	F	F	F	F
Iowa	00000001025000	County Highway Agency	3,346.3	1964	Concrete Continuous	Slab	F	F	F	F	F	F	F	F	F	F
Iowa	00000001179900	County Highway Agency	1,456.3	1959	Steel	Stringer-Multi-beam or Girder	F	F	F	F	F	F	F	F	F	F
Iowa	00000001040050	County Highway Agency	807.3	1940	Steel	Stringer-Multi-beam or Girder	F	F	F	F	F	F	F	F	F	F

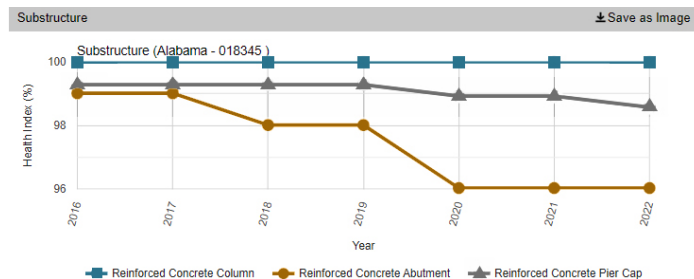
Source: FHWA.

Figure 2. Screenshot. Bridge condition transition history.¹

- **Historical changes to lightweight aggregate concrete**—A new module was added to the Historical Spec Changes tool. A historical review of the lightweight aggregate concrete design development is available through the first edition of the load-and-resistance factor design specifications under the Library menu.

INFOBRIDGE RECENT ENHANCEMENTS (CONTINUED)

- Historical trends of the health index (HI)—InfoBridge can now show the historical trend of the HI for the various bridge elements in a graphic format. HI for a specific bridge element is the weighted average of the number of elements in each of the four condition states.



Source: FHWA.

Figure 3. Screenshot. Historical trend of HI.¹

- Filter for bridges by city—Many Place Code values in the NBI are outdated or erroneous. InfoBridge has a new filter, City (InfoBridge Place Code-Place Name), under Advanced Find. Bridges are assigned to cities based on the NBI-reported bridge location and the United States Census Bureau Place Code and Place Name locations.
- Enhanced Export Data option—In addition to the Current Year and All Years options, users can now specify a range of years to export data under the Selected Bridges' Table options. A new option allows exporting data on bridges in Metropolitan Planning Organizations, Political Districts, and Cities.

- Export graph data in comma-separated values (CSV) format—Users can now export NBI Historical Graphs data into CSV format for further processing.

LTBP STAFF MET WITH TRB EXPERT TASK GROUP (ETG) ON BRIDGES AND LTIP ADVISORY COMMITTEES

LTBP program staff met with the TRB LTIP Advisory Committee in November 2022 and the ETG on Bridges and August 2022. The committees are representatives from State departments of transportation, academia, and industry. LTBP staff provided updates on enhancements to InfoBridge, ongoing research projects, communication and outreach activities, and data collection efforts.

LTBP SESSION AT 2023 TRB ANNUAL MEETING

FHWA presented a session on the LTBP program at the 2023 TRB Annual Meeting. The session provided updates on the LTBP program, accelerated bridge performance testing, the January 2023 release of InfoBridge, the Transportation Pooled Fund Study TPF 5(474) on the Bridge Deck Preservation Portal, and a presentation by the first-place winner of the FHWA 2022 LTIP Student Data Analysis Contest (Bridge).

The TRB Standing Committee on Structures and Maintenance (AKT40) sponsored the session, and the TRB Standing Committees on Bridge and Structures Management (AKT50), Bridge Preservation (AKT60), and Testing and Evaluation of Transportation Structures (AKB40) cosponsored.

¹Federal Highway Administration. n.d. "LTBP InfoBridge™" (web page). <https://infobridge.fhwa.dot.gov/Home>, last accessed April 12, 2023.

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