

# Federal Highway Administration Releases Mobile Application for Bridge Inspector's Manual



by Doug Blades, Federal Highway Administration

When certified inspectors perform bridge inspections, they rely on a 2000-page manual to guide them. The *Bridge Inspector's Reference Manual* (BIRM) is typically contained in two three-ring binders and contains just about everything a bridge inspector needs to know about the national bridge inspection standards, the duties of a bridge inspection team, basic bridge terminology, and how to perform bridge inspections. But because of its bulkiness, bridge inspectors hesitate to carry the manual into the field, preferring instead to leave the two binders in their office or vehicle. But what if bridge inspectors could fit the entire BIRM into their pocket?

That's what the Federal Highway Administration's (FHWA) National Highway Institute (NHI) has done. To make the BIRM more accessible and easier to use, NHI has developed a free mobile application of the BIRM that bridge inspectors can access on their smartphones or tablets.

"NHI strives to develop reference material in a format that can be useful to practitioners," says Louisa Ward, the BIRM application project manager and training program manager at NHI. "Today's professionals demand just-in-time learning and the BIRM app fills that need for the bridge inspection community."

The BIRM application includes all the content from the manual, including information on improved bridge inspection techniques, culverts, fracture critical members, cable-



A bridge inspector uses the Bridge Inspector's Reference Manual Application on his tablet. All Photos: Federal Highway Administration.

stayed bridges, prestressed concrete segmental bridges, moveable bridge inspection, underwater inspection, nondestructive evaluation, and critical findings.

With the importance of our inspection program growing as our bridges age, there is greater need than ever to have inspections that are both high quality and consistent among inspection teams. By optimizing the *Bridge Inspector's Reference Manual* for mobile devices, inspection teams can routinely use the manual to ensure we have the best inspections possible.

The BIRM application has many features to make the bridge inspector's job easier:

- The application works on the Apple iOS and Android platforms. NHI plans to expand the BIRM app to work on the Microsoft Windows and Blackberry platforms.

- The application optimizes the screen size so that information is displayed full size on smartphones and tablets.
- Organized into chapters and topics so that users can download either the entire



Bridge Inspector's Reference Manual (2 Volumes).



Bridge Inspector's Reference Manual Application Icon available for download on the iPhone and Android platforms.



A bridge being subjected to a safety inspection.

Now with the application and an iPad, I have the entire manual at my fingertips while standing at a bridge.

can be used in remote locations where internet connections are either limited or unavailable.

- Inspector-generated notes can be shared with team members and team leaders.
- “The world of bridge inspection will never be the same thanks to the BIRM application,” says Patrick C. Park II, QA/QC bridge inspection team leader for the West Virginia Department of Transportation. “It’s so convenient and easy to use when compared to the old bulky hard-copy binders and laptop versions. Now with the application and an iPad, I have the entire manual at my fingertips while standing at a bridge. With this application, the BIRM now becomes a powerful field reference.”

For more information about the BIRM application, please visit [www.fhwa.dot.gov/bridge/birm/](http://www.fhwa.dot.gov/bridge/birm/). 

- manual or only the content they desire.
- Capable of performing both keyword and full-text searches and contains a searchable glossary. Pop-up pictures and figures allow users to click on any image and enlarge it to fit the appropriate screen.
- Bookmarks can be placed anywhere in the BIRM application content using the embedded eReader.
- Once downloaded, all application content is stored locally on the user’s mobile device so that the application



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