



## Mississippi River Bridge at Lansing Project Update – Dec. 7, 2023

### What's happening right now:

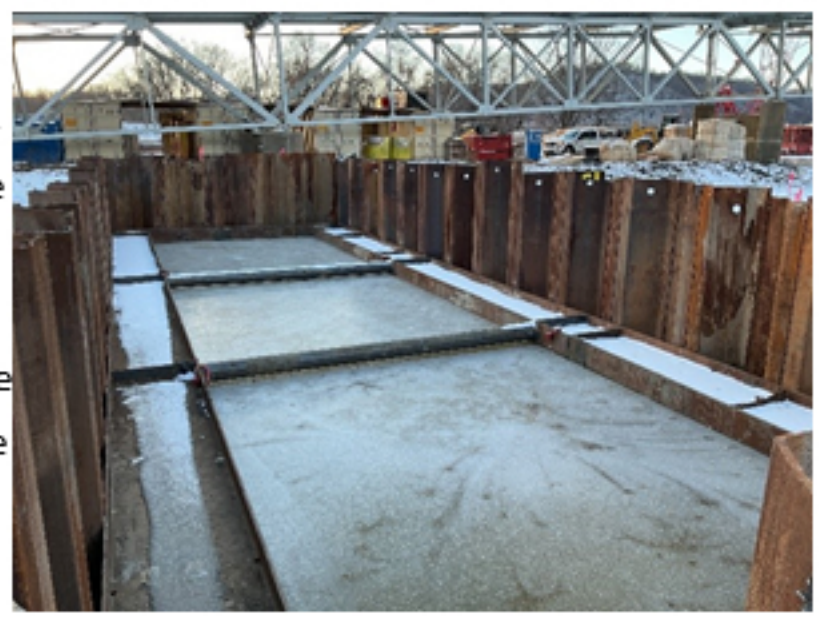
We had a beautiful month of November for construction, and our crews have been taking advantage of it. You will notice the Wisconsin side of the Mississippi River Bridge looks more and more like a major construction site every day. Over the past month, we have seen progress on the access roads, dock wall, bridge berm grading, and coffer dams for the construction of bridge piers.



To finish the construction site access roads, our contractor is placing reinforcing fabric and rock to make safe and stable locations for their crews to operate the equipment. In this photo, you can see a crane vibrating large metal sheets into the ground. A large “hammer” attachment is used with hydraulic lines that make a 7,000-pound claw shake back and forth very quickly. The weight and vibration push these metal sheets into the sandy ground like a hot knife through butter. The sheets also use a “tongue and

groove” to connect. We connect them in a large, enclosed rectangle to create a cofferdam. Cofferdams are built to provide a dry working area, below the water line, allowing us to construct some of our deeper structures like piling and pier footings that will one day be under water.

Speaking of cofferdams, our contractor has completed the first of two, necessary to construct the bridge piers on the Wisconsin side of the river. In the picture on the right, you can see the metal sheets mentioned above, as well as some other engineered steel supports to ensure the walls don't move. In this picture you can see a rink of ice because our contractor isn't working inside the cofferdam yet. When they start, they will use a small electric or gas-powered pump to remove all the water. Typically, only a small amount of water seeps back in because the metal sheets are connected. Soon, our contractor will start driving the pilings in these areas that will support the concrete footing of these bridge piers.



Another accomplishment we've made is the completion of the dock wall. This is yet another use for the metal “sheet pile” we've been talking about, and in this case, the metal sheets are filled with rock to provide a level work platform out into the river. Most of the equipment and materials necessary to construct the bridge will be loaded onto barges from this location and transported out onto the river to be lifted or poured into place.

When working with materials like sand, engineers are typically concerned with how much it will settle over time. To make sure our new bridge doesn't have any settlement issues, we have what is called a “settlement period” for our bridge berm embankments. In the picture on the right, you can see the embankment our contractor has constructed where the new bridge will touch down on the Wisconsin side of the river. This embankment has been thoroughly compacted and tested, but we will let it sit for at least 45 days before we continue building this part of the bridge. This will make sure that the material is done settling before we continue.



You might also notice this barrier as you drive past the construction project on the Wisconsin side of the river. This barrier was put in place to make sure no one hits the new bridge berm embankment. It may not look dangerous, but the steep temporary slopes during construction can cause vehicles to react differently and even lose control if someone were to accidentally leave the roadway at this location. The barrier makes sure that even if someone loses control, everyone stays safe traveling through the work zone.

Finally, an interesting operation our contractor performed was a soil boring. What you see in this picture is a crew operating a “drill rig.” The rig has a hammer that pounds a steel rod down into the ground. They then pull the rod back out of the ground and take a sample of the soil at the end of the steel tube. This repetitious process continues, and they take a sample about every five feet of depth down to 160 feet deep at this location. We will then use that information to verify that the soil types and conditions used by the design engineer are similar to what we are finding in the field. This is an important check to perform to validate how deep the strong, supportive, bedrock is located below ground and confirm that the ground is at least as strong as the designer expected it to be. If we find any surprises during the boring, we can work with the designer to make changes before construction of the new foundations begins.



### Stay connected:

Website: <https://iowadot.gov/lansingbridge/Home>

Facebook: <https://www.facebook.com/LansingBridge/>

Lansing Bridge Construction Project | Iowa Department of Transportation

[Manage Subscriptions](#)