## Berrien County Road Department Makes Positive Impact with Hill Road Bridge Improvements

## October 27, 2020

Berrien County has a unique four-cell timber culvert carrying Hill Road over Mill Creek. Highway bridges and culverts over 20 feet in length, like the Hill Road over Mill Creek structure, are inspected for safety and load carrying capacity regularly.







Figure 2: View from inside the Mill Creek timber culvert

During the latest inspection, the bridge inspector observed cracks in the timbers of the ceiling of the 38-year-old culvert. These cracks required the Berrien County Road Department (BCRD) to restrict the size and weight of vehicles crossing over the culvert.



Figure 3: Cracks in ceiling of Hill Road culvert prior to repairs



Berrien County Road Department's Managing Director, Jason Latham, knew this would present a problem for local farmers who would soon need to harvest their crops for the season. Working with The Kercher Group and Scott Civil Engineering Company, the Berrien County Road Department developed an action plan. After a team meeting, it was decided to design steel repair plates to strengthen the cracked timbers. The repair plates were manufactured by BCRD staff in their maintenance shop and installed within a week, allowing the load carrying capacity to be restored enabling safe travel for first responders, the traveling public and farmers.



Figure 4: Josh (BCRD) fabricating steel plates in Road Department maintenance shop



Figure 5: Kurt (BCRD) prior to installing steel plates

"The repairs made to the Hill Road Bridge have enabled the bridge rating to go from poor to fair. This work will provide support to local agricultural businesses, emergency vehicles and school busses that need to use this bridge. The Road Department is lucky to have such a capable workforce to quickly respond to critical safety needs like this." – Jason Latham



Figure 6: Steel plates installed to timber culvert



Figure 7: Updated bridge weight limits following repairs

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