Roche de Boeuf Committee Meeting

Friday, April 27, 2026, 8:30 am; ODOT District 2 Office

Attendees: Pat McColley, David Geckle, Joanie Cherry, Kacey Young, Mayor Tim Pedro, City Administrator Jon Gochenour, Councilman Todd Borowski, John Pautz, Bill Vermes (via Teams), Rex Childers

Meeting Minutes

- Pat McColley and Tim Pedro thanked everyone for coming together
- Rex Childers discussed how the group is working positively together and how to keep moving forward, handoff of information and responsibility needs to continue to happen.
- Tim Pedro stated although the Roche de Boeuf project is not going to be discussed in the Monday council meeting, he is keeping council updated.
- Bill Vermes recapped the information in the email he sent the group on Friday April 24, 2026. Please see a copy of the email at the end of the meeting minutes.
- John Pautz discussed the possibility of modifying the contractor's construction contract. He presented a revised estimate of approximately $6.75 million based on 12 spans of Contech pedestrian structures.
- John Pautz inquired about delaying the construction contract for one year to allow time for engineering. By doing so, the causeway needed for demolition could be utilized to do the bridge over bridge option. During the delay, grants could be acquired to help offset costs. He also asked what ODOT's design-build options are.
- Pat McColley stated ODOT has an awarded contract and is moving forward. He explained from a funding perspective, no funding is available in one year. OPWC has a short turn around but does not fund pedestrian projects. ODOT/TMACOG Transportation Alternative Funds (TAP) are typically available 4 years from funding approval and usually have a maximum of $2 million per project.
- Pat McColley explained if the City of Waterville takes ownership of the bridge, ODOT can provide assistance in funding applications. However, he also stated the purpose and need which is needed for funding applications will be a struggle to document since there are no pedestrian accommodations on the Wood County side and pedestrian accommodations are available just downstream at the existing Waterville bridge. Pat stated ODOT does not typically use design-build in their projects but instead use design-bid-build. He stated currently, the best option is getting the bridge to a state which the City of Waterville is comfortable taking ownership of.
- Rex Childers stated although there is no connection path on the Wood County side, the Buckeye Trail and towpath are connections which exist on the Lucas County side. He discussed the history of the Buckeye Trail and battle site and how the bridge is associated with stories.

- Pat McColley stated the battle site was there before the bridge was built and pedestrians and bikes can utilize the current bridge in Waterville.
- Pat McColley pointed out how the conversation about the bridge turns into a “we could do this” conversation. Eight years ago, when the project started the community and City were quiet. ODOT has always shared information with the public about the project from the beginning.
- Pat McColley brought up Todd Borowski’s question of what work would need to be done in 10-15 years to the bridge. Pat stated the highest risk items currently are the spandrel walls.
- Rex Childers pointed out the group is doing their due diligence for the City of Waterville by exploring all options in reference to the question about delaying the construction contract. He also said Waterville City Council needed a better understanding of liability than what has been presented to them in the past.
- Todd Borowski asked for more information about the causeway sequence and the footprint. A discussion about the causeway continued about the possible sequence of construction, environmental limitations and how the contractor controls means and methods during construction.
- Bill Vermes discussed wanting to access the top of the bridge and hand excavating to better determine the condition of the arches. Bill and Rex Childers agreed the south end access would be the best. Bill stated this activity would provide reassurance of the arch condition and more information the better. He said the load rating would take approximately 1.5 weeks and would be done using LFR code.
- John Pautz asked if any additional tools or tests could be done during the exploratory activities. Tim Pedro stated he had access to a windsor probe and penetrometer.
- Tim Pedro recapped a decision of the City of Waterville taking ownership of the bridge should be done no later than June 1. Information will be presented during city council meeting on Monday May 12.
- Pat McColley said an indication of ownership needed to take place before June 1. ODOT will talk to the construction contractor about different possibilities when the City of Waterville demonstrates forward momentum regarding possible ownership.
- Meeting Adjourned

Cherry, Joanie

From: Bill Vermes <bvermes@ymail.com>
Sent: Friday, April 24, 2026 1:27 AM
To: jpautz@gmail.com; rexchildersphd@gmail.com; Young, Kacey; Geckle, David; Cherry, Joanie; Doug Miller; Mccolley, Patrick; tim.g.pedro@gmail.com; jgoch@waterville.org
Subject: Roiache de Boeuf - Engineering Group Update April 24

Everyone,

Here is a summary of my inquiries this week.

Arch Condition (Cause and Effect of Visible Efflorescence)

I contacted Patrick Sparks (Sparks Engineering, San Antonio, Texas), and sent him representative photos of the efflorescence present on the arch intrados. Here is his reply.

Bill,

It looks like the efflorescence aligns more or less with the longitudinal bars (6" o.c.) suggesting corrosion initiation. The efflorescence may very well be calcium hydroxide from the fill. I would want to test it to see what it is, and what is the chloride and sulfate content. Also, it would be essential to test for depth of carbonation. With a bridge that old, the carbonation may be pretty deep, if not all the way through. Every bridge I've looked at that is in that age category has been deeply carbonated. Once they get past 80 years, it is hard to save them. At 120 almost, I think it is unlikely that rehab could stop the progress of decay.

So, I'd recommend those basic tests before deciding.

Give me a call any time. I'm semi-retired now.

Patrick Sparks, P.E.
Sparks Engineering, Inc.

Let me add the following. First, TTL's petrographic analysis of the two cores states all observed carbonation depths to be less than ¾ inches, which is not near the cover distance of the steel reinforcing. It is my understanding that carbonation penetration is linear over time, thus I do not think carbonation will be an issue for quite some time.

Regarding calcium hydroxide, the following is from Wikipedia:

> *Calcium hydroxide (traditionally called slaked lime) is an inorganic compound with the chemical formula Ca(OH)2. It is a colorless crystal or white powder and is produced when quicklime (calcium oxide) is mixed with water. Annually, approximately 125 million tons of calcium*

hydroxide are produced worldwide. Calcium hydroxide does not corrode iron and steel, owing to passivation of their surface.

Maintaining Historic Bridge Status

I contacted Mary Rody Ohio State Historic Preservation Office, inquiring if enough of the historic fabric would remain if all spandrel walls were removed from the bridge. Her reply is....

Hi Bill!

Thanks for making the inquiry. At first blush, I am skeptical that the bridge would retain sufficient integrity. Due to conflicting schedules, I am going to confer with staff early next week and will report back.

M

While this reply appears disappointing, I think there is room for discussion and mitigation. There are numerous examples of significant percentage of concrete element replaced in-kind on historic concrete arch bridges without the historic status being lost. Let's see where this discussion leads.

Finite Element Model

I contacted a consultant that I know well and trust during my time in consulting and as the bridge engineer for Portage County if they could develop an FE model and analysis using Midas of the Roche de Boeuf. Considering the immediacy of the decision making, I asked for a cost estimate and list of deliverables by today with a delivery an FEA by Friday, May 8, and shared my AutoCAD file and technical information I have of the structure. Wednesday, I received a reply that they cannot meet this tight schedule due to their current workload and priorities.

When I return from Oklahoma, I will start hand calcs of the arch. It won't be as accurate as FEA, but I may be able to get it done.

Zimmerman Bridge: I read this short article twice, and it is clearly stated that no equipment was on the bridge when it failed. The article also conspicuously says little more than that. I wonder if an imbalance occurred with fill still present on the first arch standing from the removed arch. On Roche de Boeuf, there are clear unreinforced compression regions that should not be placed in reversal.

Survey & Inspection

As I work on my Oklahoma project, I have been making opportunities to meet bridge engineers and historic preservation officials. Some of these meetings have become annual endeavors. Most discussions are related to Oklahoma bridges but some is of bridge work in general. Yesterday, a bridge engineer mentioned to me a new technology of stitching video together to develop a 3-D model of bridge. The new technology uses AI to develop this model and it can show defects as small as cracks in concrete and chips in paint on bridge steel. It was suggested that the cost to make this model could be less than a LIDAR survey and quicker. I'm awaiting for more information.

I don't know if the above survey can be implemented in time, but I feel it's worth considering.

Thank you,
Bill Vermes