

Municipality of West Grey

Lantz Bridge Conc. 2 WGR



May 18, 2021



Background

- Lantz Bridge (Structure 28) is located on Concession 2 WGR. Existing Bridge is a steel truss bridge with cross beams and stringers under a concrete deck, built about 1920, 15.5m span, 4.75m deck width, 12 tonne limit
- 2018 WSP Structure Rating and Rationale Report identified need for immediate work and that Lantz Bridge is not a candidate for rehabilitation. Also noted high impact of closure of structure (emergency response, traffic flows, municipal services, etc.)
- Previous OSIM reports identified: poor condition of ballast walls with severe cracking, abutment walls in poor condition, deck stringers in poor condition, structure is a single-lane (doesn't meet Bridge Code for traffic levels and speed), and it is poorly aligned with the road.

January 2021 Structure Review

- January 15, 2021, the condition of the structure was reviewed by BMROSS.
- Suspect 4 of the 6 stringers at the south end currently provide 10% or less of original resistance. The other 2 provide 50% of original resistance. At the north end, suspect 2 out of 6 currently provide no resistance and the remaining 4 provide about 50%.
- Based on our review, it was recommended the structure be closed.





MCEA Process

- Given condition of the bridge, Municipality applied for ICIP funding in 2019.
- Initiated a Municipal Class Environmental Assessment (MCEA) in 2020 to investigate options to address condition and issues with bridge.
- Following MCEA process for Schedule 'B' project, which includes: defining the problem and identifying and evaluating practical alternative solutions.
 - Includes: consultation with review agencies, First Nation and Métis communities, and the public
 - Considers impacts of alternatives on technical, social, cultural/heritage and natural environments

Problem and Alternative Solutions

- Identified problem:
 - *There are significant deficiencies with Structure 28 (Lantz Bridge) spanning the Saugeen River along Concession 2 WGR. The deficiencies include the condition, alignment and width of the structure. The deterioration of the condition of the structure recently resulted in its closure to vehicle traffic.*
- Practical Alternative Solutions Evaluated:
 - 1. Do Nothing (status quo)
 - 2. Replace with Single Lane Structure
 - 3. Replace with Two Lane Structure
 - 3A – Wood Superstructure
 - 3B – Steel Girders and Concrete Deck
 - 3C – Concrete Box Girders and Concrete Deck



Alternatives Not Evaluated

- Rehabilitation/repair is not considered a feasible or practical solution due to financial impacts to life cycle costs (i.e. will not significantly extend life of structure but will still have high costs associated with it)
- Removal and closure not considered feasible or practical due to impacts to adjacent residents and overall transportation network.

Summary of Alternatives

- 1. Do Nothing - assumed unacceptable
- 2. Replace with Single Lane Structure – does not comply with design guidelines or fully address identified problem.
- 3. Replace with Two Lane Structure, Probable Costs
 - 3A – Wood Superstructure – \$1,403,000
 - 3B – Steel Girders and Concrete Deck - \$1,363,000
 - 3C – Concrete Box Girders and Concrete Deck - \$1,403,000
- Price difference less than 3%, we would suggest no price difference.
- Pricing for all options are higher this year and are subject to Contractor availability

Summary of Alternatives, cont.

- 3A - Wood Superstructure
 - Short construction period, 12 weeks
 - Deck components can be delivered sooner
 - Originally proposed when grant application submitted.
- 3B - Steel Girders and Concrete Deck
 - Longest construction period, 16 weeks
 - Longer lead time for delivery anticipated than for wood
- 3C – Concrete Box Girders and Concrete Deck
 - Second longest construction period, 15 weeks
 - Longer lead time for delivery anticipated than for wood
- Based on information gathered the wood superstructure options appears to have a few advantages



Public Information Centre

- Virtual Public Information Centre (PIC) scheduled for Thursday May 20, 2021 via Zoom from 6:30 PM to 8 PM.
- Notice placed in Hanover Post, on West Grey website, mailed/emailed to local Concession 2 WGR residents.
- BMROSS and West Grey staff will present EA process and findings to date, review evaluations and preliminary preferred solution, take questions and comments.



Questions?

Photo



22m clear span wood superstructure bridge