



Council report

Meeting date:	March 30, 2021
Title:	Modular Panel Bridge replacement, bridge 44
Prepared by:	Vance Czerwinski, Director of Infrastructure & Public Works
Reviewed by:	Laura Johnston, CAO

Recommendation

That council approves the 2021 capital budget to a maximum of 50% of the 2020 budget to be allocated to the installation of a modular panel bridge for bridge 44 on North Line to a maximum of \$450,000.

Executive summary

Bridge 44 and 46 are located on North Line, east of Glenelg Road 23. Bridge 46 was identified for rehabilitation at a cost of \$600,000. However, as a result of further research, there is an opportunity to replace bridge 44 with a modular panel bridge at an estimated cost of \$450,000.

Background and discussion

There are four bridges on North Line between Glenelg Road 23 and Artemesia-Glenelg Townline. These structures are bridges 44, 45, 46 and 47. Bridge 44 and 46 are identified as requiring rehabilitation or replacement. Replacing bridge 44 will enable the structure to be upgraded to make it consistent with bridges 45 and 47 in regards to load limit and capacity. Implementing a modular panel bridge “Bailey bridge” solution is cost-effective, offers a 20-25 year lifespan and requires less disruption than traditional removal and replacement solutions. Modular panel bridges are the latest evolution of the original “Bailey bridge”, and are a modular bolted truss system. They are known as an affordable solution as they are bridges that can be purchased and constructed over existing bridges to accommodate heavy truck traffic. Modular panel bridges can also be disassembled and reused.

There is currently \$600,000 in the draft capital budget to rehabilitate bridge 46 to prevent a land lock scenario if 44 and 46 fail at the same time. Given bridge 44 is an ideal candidate for a panel bridge, bridge 44 can be replaced and upgraded in a much more timely and cost-effective manner. Bridge 46 will be addressed in 2022 utilizing the savings from bridge 44 and gas tax reserves.

The costs of panel bailey bridges includes the purchase of the structure, placement of the structure, contingency, engineering and approvals.



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Legal and legislated requirements

Occupational Health and Safety Act
Minimum Maintenance Standards
Building Permit Process

Financial and resource implications

2021 Capital Budget

Staffing implications

None.

Consultation

Triton Engineering Services Limited
Chief Building Officer
Police Chief
Fire Chief
Frank Cowan Company
CAO
Director of Finance
Supervisor of Rural Roads

Alignment to strategic vision plan

Pillar: Build a better future
Goal: Vibrant Community
Strategy: Investigate innovative solutions to current infrastructure challenges

Attachments

None.

Next steps

Pending the direction of Council, proceed with the procurement of the supply and installation of a bailey bridge on North Line.

Respectfully submitted:

Vance Czerwinski, Director of Infrastructure & Public Works