



## TOWN OF MINTO

DATE: December 16, 2016

REPORT TO: Mayor Bridge and Members of Council

FROM: C.A.O. Clerk

SUBJECT: Cost Estimates Repairs Structure P Rail Trail Fire

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### STRATEGIC PLAN:

- 7.2 Promote and pursue in partnership with trail groups and landowners a trail link from Palmerston to Harriston to Clifford, and develop additional trails, paths and walking tours throughout each area to link parks, natural and historic areas.

### BACKGROUND:

September 6 Council received an update report on the Rail Trail Bridge fire between the 3<sup>rd</sup> Line and 5<sup>th</sup> Line on Saturday, August 6 and passed the following resolution:

**THAT Council receives the Road Foreman's August 15, 2016 report regarding Structure P Rail Trail Fire and provides directions that staff works with the insurance company and engineer and bring a report back to Council.**

The bridge has been unpassable since the fire. Andrew Burgess of Burgess Engineering Inc has been assessing options to repair the bridge. Cost estimates provided by Triton Engineering are as follows:

#### PROPOSED REHABILITATION ALTERNATIVE

<b>Option 1</b>
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#### Description

Two existing interconnected built-up girders are the main load carrying members. The current span is approximately 16.1m, with a proposed deck width of about 2.0m. A steel channel shall be bolted to the top flange of each girder to support the anti-slip steel deck planks and steel railing. Existing wood pier trestles shall be reinforced with new wood members attached to cap and piles, in addition to wood cross-bracing. Existing timber post and lagging retaining wall shall be reinforced with similar material and configuration.

#### Preliminary Cost Estimate

1	SUPPLY AND INSTALL ANTI-SLIP STEEL DECKING [\$1087/m <sup>2</sup> x 16.1m Long x 2m Wide = 35,001]	\$35,000
2	SUPPLY AND INSTALL PEDESTRIAN STEEL RAILING [\$500/m x 2 x 20m Long = 20,000]	\$20,000
3	WOOD PIER TRESTLES REINFORCEMENT	\$25,000
4	ABUTMENT/WINGWALL TIMBER POST & LAGGING REINFORCEMENT	\$20,000
5	SITE RESTORATION	\$15,000
6	ENGINEERING FEES	\$30,000
TOTAL		\$145,000

PROPOSED REPLACEMENT ALTERNATIVE

**Option 2**

Description

A custom prefabricated bridge with two steel trusses is the main load carrying member. The proposed span of 20.0m with a total deck width of 4.0m is comprised of two steel trusses supported on new slab-on-grade concrete foundations located outside existing abutments at the ground level of trail. The deck shall be anti-slip steel deck planks with a steel railing. Existing timber post and lagging retaining wall shall be reinforced with similar material and configuration.

Preliminary Cost Estimate

1	EXISTING STRUCTURE REMOVAL	\$20,000
2	NEW FOUNDATION (SLAB-ON-GRADE) [2 x \$15,000]	\$30,000
3	FABRICATION & DELIVERY OF STRUCTURAL STEEL [\$2000/m <sup>2</sup> x 20m Long x 4m Wide=160,000]	\$160,000
4	INSTALLATION OF STRUCTURAL STEEL (SUPERSTRUCTURE)	\$40,000
5	ABUTMENT/WINGWALL TIMBER POST & LAGGING REINFORCEMENT	\$20,000
6	SITE RESTORATION	\$15,000
7	ENGINEERING FEES	\$30,000
TOTAL		\$315,000

Option 1 provides a 2.0m (6.5 feet) steel deck with anti-slip coating at a cost of \$145,000, while Option 2 is a prefabricated bridge structure with a 4.0m (13 foot) deck at \$315,000.

**COMMENTS:**

Option 1 provides for reasonable bridge use by most trail users. The 2.0m width would only accommodate a “side by side” or gator for maintenance. A wider bridge is needed to accept a larger maintenance vehicle and the current pedestrian railing design would not provide an adequate barrier for vehicle traffic. The bridge can be accessed from either side for general maintenance. While it would be nice to be able to drive over the bridge it is not critical. It may be that Option 1 can be modified to allow a pick-up truck to drive over, but this would encompass a different design criterion and come at a much higher cost. If Council is satisfied with Option 1 Triton will proceed to final design and spring construction.

**FINANCIAL CONSIDERATIONS:**

Repair costs is insurable less the \$10,000 deductible; the insurer is aware of project cost.

**RECOMMENDATION:**

That Council receives the C.A.O. Clerk’s December 16, 2016 report regarding Cost Estimates Repairs Structure P Rail Trail Fire and directs Triton Engineering to proceed with Option 1.

Bill White C.A.O. Clerk

