



AGENDA ITEM

Five Year Bridge Program

September 23, 2021

BACKGROUND

Policy OP (42) Bridge Management Plan states:

Lacombe County will establish and maintain a bridge management plan with the objective of improving and maintaining the bridge infrastructure and ensuring adequate funding is available to facilitate the maintenance, repair and replacement of bridge structures. The needs of all areas of the County shall be given equal consideration when bridge inspections, repairs, maintenance, or replacement programs are established.

Additionally, criteria have been established within the policy for the replacement of Lacombe County's bridge structures:

Priorities for the bridge replacement program are to be based on the greatest need and most benefit using the following criteria:

- a) Sufficiency rating
- b) Structural rating
- c) Cost
- d) Traffic volumes
- e) Life expectancy
- f) Functionality
- g) Detour length
- h) Local importance

Following this procedure, three bridge culverts and one major bridge were approved for construction in 2021. Additionally, Bridge File 1477, just south of the Renn Mill Centre was found to be structurally deficient after the program was approved and was added to the replacement schedule to take place in late summer/fall 2021.

Additionally, five structures were approved for design in 2021. These structures are being proposed for construction in 2022.

- 1413 – Range Road 23-5 north of Highway 11
- 7846 – Range Road 2-1 south of Highway 12



- 7937 – Township Road 41-3 west of Highway 821 (Coinciding with road construction)
- 13455 – Range Road 4-0 south of Highway 12
- 72595 – Township Road 41-3 west of Highway 12 (Coinciding with road construction)

ANALYSIS

Based on the Bridge Management Plan and Policy OP (42), replacement priorities have been developed for bridges within Lacombe County.

Replacement Schedule

The five year replacement schedule has been updated based on the criteria laid out in the Bridge Management Plan. Given the length of time required for engineering and environmental approvals for most structures the plan schedule outlines that engineering and design are to be completed in the year before construction. This process will allow for the timely completion of projects.

2022 Proposed Replacement (engineering and design currently underway):

- 1413 – Range Road 23-5 north of Highway 11
- 7846 – Range Road 2-1 south of Highway 12
- 7937 – Township Road 41-3 west of Highway 821 (Coinciding with road construction)
- 13455 – Range Road 4-0 south of Highway 12
- 72595 – Township Road 41-3 west of Highway 12 (Coinciding with road construction)

There is also one structure proposed for design in 2023, bridge file 1454, which is a major structure over the Medicine River on Township Road 41-2, west of Range Road 4-1. While there is only one structure proposed for design next year, it is a major structure, which will require significant preparation and work to complete the project.

Many of the subsequent years also see a decline in the number of structures and the overall cost as the bridge inventory has begun to improve vastly with the work that has been completed since 2014.



ALTERNATIVES

1. Approve the 5-Year Bridge Program as presented and tender and award the 2022 capital bridge projects.
2. Take other action as determined by Council.

BUDGET IMPLICATIONS

2022 Bridge Capital Costs	\$ 2,799,000.00
Bridge Reserve projected balance as of December 31, 2021	\$ 2,936,903.88

Funding to be determined on grant availability with the remainder to be funded from the Bridge Reserve. Reserve contribution amount to be determined by council during 2022 budget process.

LEGISLATIVE RESPONSIBILITIES

Municipal Government Act – Section 18 (1) - Subject to this or any other Act, a municipality has the direction, control and management of all roads within the Municipality.

Municipal Government Act: Section 3 – The purpose of a municipality are:

- (a) to provide good government,
- (b) to provide services, facilities or other things that, in the opinion of council, are necessary for all or a part of the municipality, and
- (c) to develop and maintain safe and viable communities

PUBLIC PARTICIPATION

Lacombe County sees the value in engaging and informing the public/stakeholders through a variety of mediums as outlined in the *Policy AD(40): Public Participation Policy*. The appropriate level of engagement for each public participation opportunity is selected on a project-to-project basis. For this item the following engagement will take place:

- *Inform*: To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions



Highlights of all County Council meetings are published on the County Website and in the County News.

STRATEGIC PLAN

The following elements of the County’s Strategic Plan are relevant to this issue:

Core Strategy #6 – Infrastructure

6.2 (A) – Develop a long range capital asset plan.

RECOMMENDATION

That Council approve the following resolution:

That Council adopt the 5-Year Bridge Program; and further, that Council authorize the County Manager to tender and award the bridge projects for 2022.

PREPARED BY: Bryce Maschio, Project Manager

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REVIEWED BY: Bill Cade, Director of Operations

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REVIEWED BY: Tim Timmons, County Manager

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5 Year Bridge Replacement Schedule						
	2022	2023	2024	2025	2026	2027
7937	\$ 732,000.00					
13455	\$ 424,000.00					
1413	\$ 834,000.00					
75650		\$ 35,000.00	\$ 302,981.59			
8155		\$ 35,000.00	\$ 338,372.72			
364			\$ 35,000.00	\$ 334,495.54		
6989			\$ 35,000.00	\$ 332,741.76		
70458					\$ 35,000.00	\$ 283,004.57
9146					\$ 35,000.00	\$ 259,774.10
7846	\$ 395,000.00					
72595	\$ 354,000.00					
1454	\$ 60,000.00	\$ 1,863,751.62				
8504				\$ 60,000.00	\$ 939,064.02	
204				\$ 60,000.00	\$ 1,761,441.90	
1091					\$ 60,000.00	\$ 686,992.86
	\$ 2,799,000.00	\$ 1,933,751.62	\$ 711,354.31	\$ 787,237.30	\$ 2,830,505.92	\$ 1,229,771.53
	Design in previous year	Replacement cost minus design	Bridges	Culverts	Part of Road Construction Project	Culvert Extensions on Road Construction Project