



COUNCIL REPORT

Conrich Area Servicing

Electoral Division: 6

File: 5045-300

Date:	February 18, 2025
Presenter:	Jeannette Lee, Manager
Department:	Capital & Engineering Services

REPORT SUMMARY

In 2023, owners of residential properties within Meadow Ridge Estates, an existing subdivision within the Hamlet of Conrich boundary, petitioned Council to install water and wastewater infrastructure for 16 parcels, funded through a future Local Improvement Tax (LIT). However, cost estimates revealed higher than anticipated expense per parcel. While Council approved the first reading of Borrowing Bylaw C-8420-2023 outlining the LIT on June 20, 2023, widespread concerns about affordability were raised, including an attempt from some owners to petition against the LIT.

At the May 14, 2024 Council meeting, Council directed Administration to explore alternative options to extend services in the Conrich area and reduce costs for Meadow Ridge residents:

MOVED by Councillor Samra that Council directs Administration to defer the installation of infrastructure, water, and wastewater local improvement at Meadow Road in the Conrich Estates subdivision;

AND THAT Council directs Administration to explore other options for expanding water and wastewater services in the Conrich area, with a report to be brought back to Council by the end of Q3 in 2024.

(Note: due to complexities and numerous servicing options for the area, an extension was granted by Council at the October 8, 2024 Council meeting for the report to be presented in Q1 of 2025.)

Administration initiated a preliminary servicing study for the expanded Conrich area, and a further evaluation of servicing options for Meadow Ridge Estates. These studies focused on assessing servicing needs for existing residents and potential new utility customers, current servicing requests and community demands, while also considering a broader view for future expansion and servicing requirement as development and growth continues, as is anticipated and outlined within the Conrich Area Structure Plan (ASP).

Options were explored for water and wastewater servicing, determining that costs to complete further wastewater servicing within the Conrich area would far exceed benefit. Due to geographical constraints, expansion of wastewater sewers would require the use of lift stations, adding significant cost with few benefitting users. It is recommended to allow future growth demand to determine the expansion of the wastewater sewer network.

Delivery of water servicing is attainable as water is a pressure system. The proposed water feedermain network through the core of Conrich would expand on existing infrastructure, creating a looped system to service 1,039 acres and 142 existing properties. The cost of this system is estimated at approximately \$7.75 M, supporting diverse land use and future expansion opportunities. A phased approach would

Conrich Area Servicing

integrate smaller-diameter mains for localized service connections, ensuring system integrity, continuous fire-flow coverage, and cost efficiencies.

Administration requests \$700,000 to support detailed engineering, land acquisition, and refined cost estimates for the Conrich water feedermain expansion. This investment would ensure the development of a resilient, adaptable, and future-ready water distribution network that meets the needs of both existing residents and future growth.

ADMINISTRATION'S RECOMMENDATION

THAT Council approves a budget adjustment of \$700,000 from the Local Government Fiscal Framework Grant to complete the detailed engineering and land acquisition required to expand the water feedermain network within Conrich, as per Attachment A.

THAT Council directs Administration to revisit Borrowing Bylaw C-8420-2023 and the Meadow Ridge Estates Local Improvement Tax (LIT) for 16 parcels, based on the revised engineering estimates, before the end of Q2 2025.

BACKGROUND

The community of Conrich is in the central east region of Rocky View County, bordering the east side of the City of Calgary and north of Chestermere. The Conrich ASP (currently under review, as per the direction of Council at the December 10, 2024 Council meeting) aims to provide guidance for land use, infrastructure development, and community design in this rapid growth development area of the County. It is essential to create well-structured, long-term, and comprehensive plans for the hamlet and surrounding area, ensuring phased, strategic expansion and local growth opportunities, considering both existing and future demands for infrastructure.

Water and wastewater servicing in the Conrich area currently serves Cambridge Estates and continues through to Prince of Peace. Expansion of the water feedermain to a looped system through the core of Conrich would allow for the optional servicing of existing residents, providing more reliable water servicing through times of emergency or maintenance, as well as would allow for fire coverage within the area. Wastewater expansion in the area, on the other hand, is more difficult as this is typically a gravity system. Due to geographical constraints, it is recommended that wastewater expansion be reviewed as development demands – growth demands growth.

Several servicing requests have been made from existing residents in the Conrich area, with a primary desire for water servicing. Aside from the Meadow Ridge community, of which made requests for expanded servicing through the LIT, requests for service have also been made from other facilities, namely the Khalsa School, and the Chestermere Christian Fellowship.

ANALYSIS

Based on the completed engineering studies, alignment for a water feedermain network was identified through the centre of the Conrich area, expanding on the existing feedermain and completing a looped system. This proposed alignment would effectively service a catchment area of approximately 1,039 acres, encompassing 142 existing properties and potential new utility customers of which range in size from country residential to large agricultural holdings (future subdivision and increased density expected per the ASP), demonstrating the system's ability to accommodate diverse land uses and scales efficiently. This alignment would also provide expansion possibilities throughout the greater Conrich area and an opportunity for further regional connections. Initial high-level estimates for the feedermain spine network are estimated at \$7.75M.

Conrich Area Servicing

A phased, long-term service plan integrates existing residents, regional strategies, and levy-funded assets, featuring a looped water system for enhanced reliability, fire flow capacity, and service stability. A looped water distribution system offers improved reliability by ensuring continuous water circulation and reducing risks associated with single-line feeds. It enhances service stability during maintenance or emergencies and provides sufficient flow for fire protection. The phased implementation, starting with the regional feedermain network, will allow each community to connect to the network system, maintaining system functionality and accepting increased demands. Strategic planning of tie-ins is critical to prevent disruptions and ensure the network can accommodate growth efficiently.

With the completion of feedermain installations, servicing options to existing parcels could then be addressed through a phased approach. Smaller diameter mains would be connected at strategically placed tie-ins to the feedermain, providing interior networks for service connections. To protect the stability of the feedermain network, service connections should be limited to the smaller mains network. Reducing the number of tie-ins helps minimize the risk of failure and enhances overall system integrity. As well, great cost and operational efficiencies may be realized with controls and ties to smaller diameter pipes, aiding the feasibility of servicing existing residents.

The Meadow Ridge Estates subdivision was considered in this phased approach for servicing, and while the looped feedermain would provide greater reliability, an interior looped network may be constructed and connected through Cambridge Estates. This would reduce costs from the original LIT estimates, should the requesting residents wish to proceed with water and wastewater servicing. Based on high-level estimating, servicing costs of between \$4.5 M and \$5.6 M are anticipated for the 42 parcels. Residents should expect to pay approximately \$108,000 to \$134,000 per lot. Should the community wish to proceed with only water servicing the estimated cost would be approximately \$64,000 per lot, however future wastewater servicing costs would greatly increase due to expected inflation and duplicated work, likely leaving costs unreasonable. Note, these costs do not include water and wastewater connection fees that may be applied to allocate system capacity to individual lot owners, as per the Master Rate Bylaw (2024), a total of \$35,295 per lot.

Based on the above information and proposed phased construction, stages and cost estimating are broken down below:

Existing Watermain – Attachment B

Existing 600 mm feedermain services Cambridge Estates and extends to Prince of Peace south of Highway 1.

Proposed Feedermain – Attachment C

Proposed extension to the existing 600 mm feedermain on Conrich Road and again on Township Road 250, creating a looped system. Total estimated cost of \$7.75 M.

1. Township Road 250 – 400 mm Feedermain - east to west extension
 - a. The west extension provides service options to existing residents and future tie-in for expansion throughout the greater Conrich area and regional extension out to the OMNI reservoir, creating a 'back-up' loop once completed.
 - b. Estimated cost of \$3.75 M.
2. Conrich Road – 500 mm Feedermain – south to north extension
 - a. Completes the looped connection, also improving the reliability of the Prince of Peace and Cambridge Estates servicing. Provides opportunity for smaller loop creation to feed existing residents, including the Khalsa School.
 - b. Estimated cost of \$4.0 M.

Conrich Area Servicing

Proposed Meadow Ridge Estate Mains and Servicing – Attachment D

The Meadow Ridge community comprises 42 residential parcels, each approximately 2 acres in size. Of these, 16 parcels participated in the initiation of the LIT. The preliminary servicing plan, detailed in Attachment C, shows a phased construction approach to allow for servicing to advance to the initial 16 requesting parcels, should only the residents in Phase 1 of the community wish to proceed.

Due to the high costs for servicing in developed areas, we offer the below estimates for full servicing with water and sewer, and then water service only. While initially cost reduction would be achieved with only water servicing, efficiencies during construction would not be realized and the installation for sewer in the future would be greatly increased as trenching, rehabilitation and working around existing infrastructure would need to be completed once again.

1. Phase 1, Servicing 16 parcels
 - a. Water and wastewater running in parallel, 200 mm water main connected to the existing feeder main on Conrich Road, parallel connections will extend south into Cambridge Estates, ensuring adequate fire-flow.
 - i. This phase can utilize a standard gravity wastewater collection system that connects directly to the existing downstream infrastructure in Cambridge Estates. The current capacity of the regional system is sufficient, and no upgrades are required for this connection.
 - ii. Estimated cost of \$2.0 M, or approximately \$128,000,000 per lot.
 - b. Water servicing only, 200 mm watermain connected to the existing feedermain on Conrich Road, adequate fire-flow achieved.
 - i. Estimated cost of \$1.4 M, or approximately \$86,000 per lot.

2. Phase 2, Servicing 26 lots
 - a. Water and wastewater running in parallel, 200 mm watermain, looped through the community. Adequate fire-flow achieved for the current number of residents. This area cannot be easily serviced for wastewater by standard gravity mains due to topographical challenges. Options for sewer include the use of a local lift station, the use of low-pressure grinder pumps, or a gravity sewer connection that requires land acquisition.
 - i. Local Lift Station: Pump station (in front of private property) to pump flows from the constrained area into the gravity system established in Phase 1. Least desirable, most expensive.
 - ii. Low-Pressure Grinder Pumps: provides an alternative to a lift station by requiring grinder pumps for each home (similar to those used in Bragg Breek), reducing the scope of public infrastructure but adding individual homeowner equipment and cost.
 - iii. Land Acquisition: gravity sewer serving is possible with land acquisition but requires crossing two existing acreages in Meadow Ridge Estates as well as a County MR in Cambridge Park. Feasibility for land acquisition would need to be explored.
 - iv. Dual servicing with gravity sewer is estimated at approximately \$2.9 M or \$110,000 per lot.
 - b. Water servicing only, 200 mm watermain, looped through the community, adequate fire flow achieved.
 - i. Estimated cost of \$1.8 M, or approximately \$70,000 per lot.

Future Phased Servicing – Attachment E

Future connections and extensions with watermain within localized community areas, servicing from the proposed 200 mm and 250 mm watermains. These areas could be divided into logical and serviceable areas as the requests and demands were presented. Servicing for the Khalsa School and Chestermere Christian Fellowship would be reviewed with this approach.

Conrich Area Servicing

COMMUNICATIONS / ENGAGEMENT

No communication or engagement is currently required.

IMPLICATIONS

Financial

To provide the water feeder main network infrastructure, a substantial upfront investment would be required of the County. While a portion of the project may be funded through the County's levy structure, the remaining investment would need to be gained through additional funding mechanisms. These could include:

- **Grant Funding:** exploring provincial or federal grant opportunities to offset upfront expenditures.
- **Future Cost Recovery:** establishing cost recovery mechanisms tied to future development, ensuring that new projects contribute to infrastructure funding.
- **Master Rates Bylaw Connection Fees:** incorporation of costs into connection fees outlined in the *Master Rates Bylaw*, allocating a portion of the expenses to individual lot owners as they tie into the system.
- **Local Improvement Tax:** implementing an LIT to distribute costs among benefiting property owners. There is the potential for connection fees to become unfeasible for existing residents to tie into the regional system

By leveraging a combination of these approaches, the County could manage the financial burden of the project while ensuring sustainable infrastructure development and equitable cost distribution.

Other Implications

While the investment for the feeder main is significant, it can only be expected that the costs for construction will continue to rise, and as development increases in the area, land costs may increase and ease of construction decrease, also leading to additional cost in time.

The absence of fire suppression infrastructure in some developed areas further heightens safety risks, underscoring the urgency for comprehensive water servicing solutions. Additionally, dissatisfaction among landowners regarding the available service options poses a risk to community support, particularly if the proposed solutions are perceived as costly or insufficiently reliable.

STRATEGIC ALIGNMENT

Key Performance Indicators		Strategic Alignment
Effective Service Delivery	SD2: Services are resourced and delivered to specific groups as intended, and citizens are satisfied with the outcomes	SD2.2: Citizens satisfied with the County's defined service levels
Effective Service Delivery	SD3: Citizens are satisfied with Public Engagement opportunities and availability of information	SD3.2: Citizens satisfied with the public engagement opportunities provided by the County

Conrich Area Servicing

Key Performance Indicators		Strategic Alignment
Effective Service Delivery	SD4: Services are continually assessed for improvements in cost efficiency, effectiveness, and customer experience	Progressive deep utility servicing to the Conrich area, in alignment with forecasted growth and sustainability needs.

ALTERNATE DIRECTION

THAT Council directs Administration to revisit Borrowing Bylaw C-8420-2023 and the Meadow Ridge Estates Local Improvement Tax (LIT) for 16 parcels, as per the original petition, before the end of Q2 2025.

Benefits

The original request of servicing 16 lots in Meadow Ridge Estates would be addressed, and would provide fire suppression services in the area.

Disadvantages

There is lesser benefit to servicing only 16 lots of the full 42 lots and not averaging costs across a greater number. Costs would be approximately \$128,000 per lot, not including connection fees per the *Master Rates Bylaw*.

Risks

After preparing Borrowing Bylaw C-8420-2023 as per the original LIT petition, widespread concerns about affordability were raised, including an attempt from some owners to petition against the LIT.

ATTACHMENTS

- Attachment A: Budget Adjustment Form
- Attachment B: Existing Service
- Attachment C: Proposed Feedermain
- Attachment D: Meadow Ridge Estate Servicing Plan
- Attachment E: Future Phased Servicing

APPROVALS

Manager:	Jeannette Lee, Capital & Engineering Services
Executive Director/Director:	Byron Riemann, Chief Operating Officer
Chief Administrative Officer:	Reegan McCullough, Chief Administrative Officer