



Description of City of Calgary Servicing of the Proposed Annexation Area

Presentation to City of
Calgary – Foothills County
Annexation Negotiation
Committee

June 19, 2023

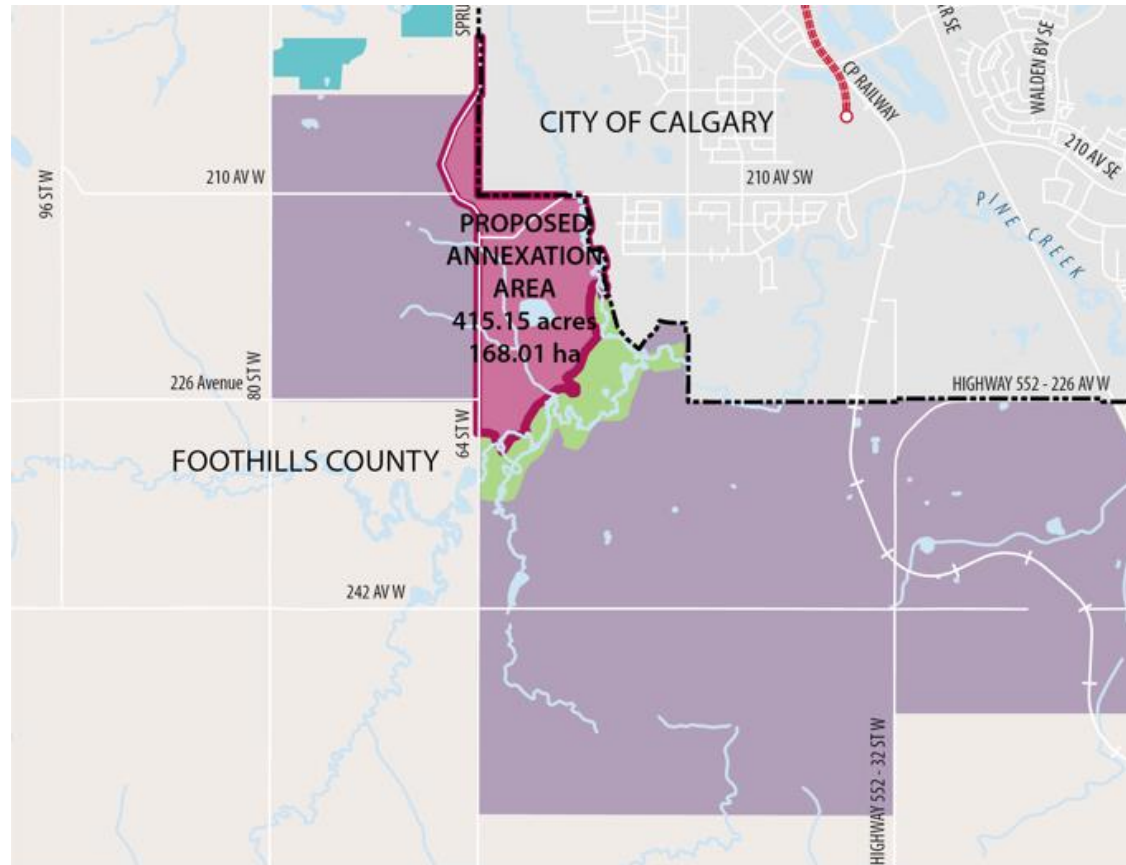
Presentation Outline

- 1) Introduction to servicing analysis**
- 2) Servicing analysis process and assumptions**
- 3) Conclusion**

Use of the Results of the Technical Analyses

- The technical analyses outlined in this presentation are high-level
- The technical analyses and results included in this presentation can only be used for the purposes of completing the annexation application for annexation of lands from Foothills County as outlined in this presentation
- The technical analyses and results included in this presentation cannot be used for any other planning processes (e.g., Area Structure Plan (ASP), outline plan)
- Future analysis/studies and field work will be required at the future planning phases
- Future ASP work will need to be approved by City of Calgary Council; new City growth process will need to be followed
- Adequate budget will need to be considered for required capital infrastructure

Proposed Annexation Area



Legend

- Proposed Annexation Area
- Spruce Meadows
- Sirocco ASP Golf Course
- Calgary Growth Area
- LRT Red Line Alignment, Existing
- Proposed LRT Red Line
- City of Calgary Boundary



Servicing Analysis

- Completed to support the discussion on the annexation area and a future annexation application
- Process:
 - Estimate Environmental Reserve
 - Estimate population post-development
 - Evaluate ability for The City to service the proposed annexation area



Estimating Environmental Reserve for the Proposed Annexation Area

Purpose

- Estimate developable/undevelopable areas to inform servicing analysis

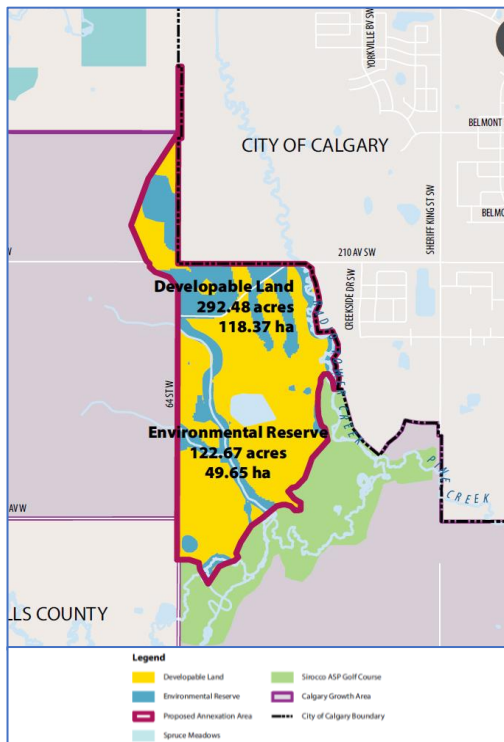
Assumptions & Limitations of the Data

- Estimated according to current City of Calgary policies and guidelines
 - Environmental Reserve Setback Guidelines (2007)
 - Calgary Wetland Conservation Plan (2004)
 - City of Calgary non-permanent streams classification
 - Slope Stability Management Policy & Slope Stability Management Framework
- Based on available desktop data and not field verified
- Ravines, coulees, gullies, unstable slopes estimated by slope steepness (%)
 - High ER Estimate: slopes >8%
 - Medium ER Estimate: slopes >15%
 - Low ER Estimate: no slopes

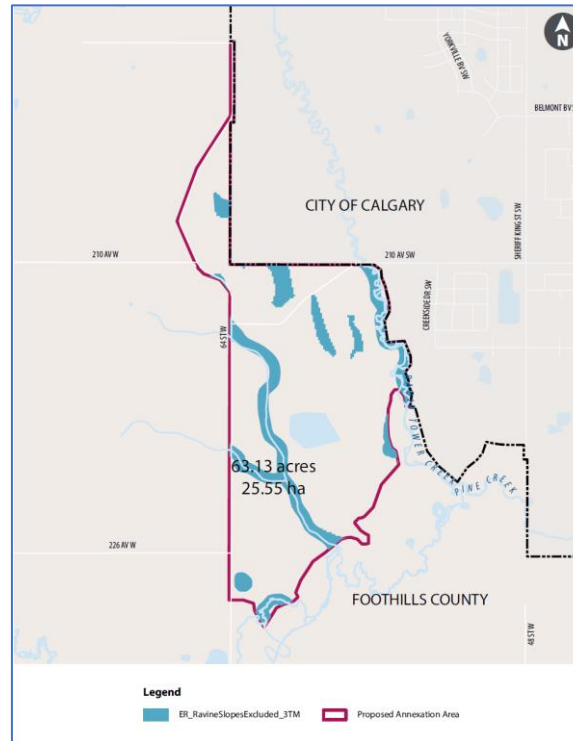
Estimating Environmental Reserve for the Proposed Annexation Area

Results

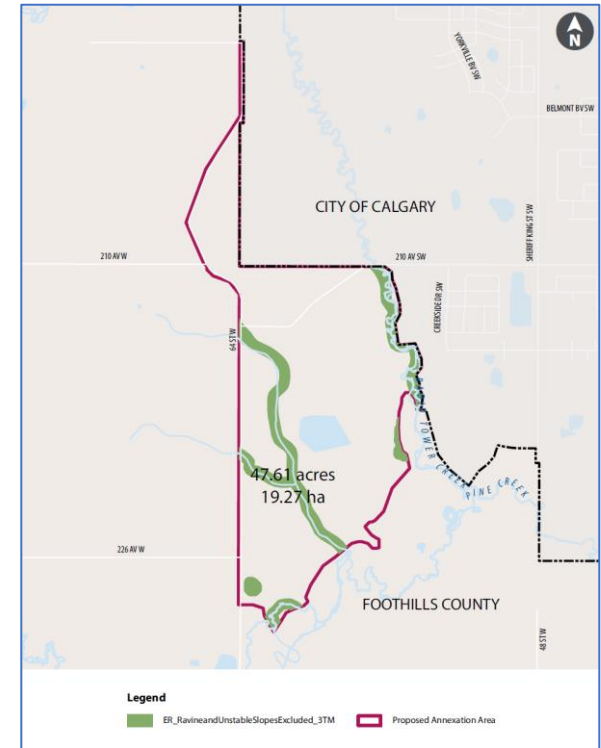
High ER Estimate



Medium ER Estimate



Low ER Estimate



Estimating Population for the Proposed Annexation Area

Process

- Estimate gross developable area using environmental reserve takeout assumptions.
- Use densities provided by Calgary Metropolitan Region Board (CMRB) Growth Plan placetypes for estimated total units.
 - 12 UPH – Residential Placetype (10% of developable area)
 - 25 UPH – Masterplan Community Placetype (90% of developable area)
- Housing split determined by using 60% low density and 40% multi-residential assumptions.
- Standard assumptions for population per unit (ppu) based on housing type are used to provide total population at full build out.
 - 3.3 PPU – Low Density
 - 2.2 PPU – Multi-Residential

Estimating Population for the Proposed Annexation Area

Scenario	Hectares	Acres	Residential Placetype Units	Master Planned Placetype Units	Total Units	Low Units	Multi Units	Low Pop	Multi Pop	Total Pop
Low ER	148.74	367.53	178	3347	3525	2115	1410	6980	3102	10082
Med ER	142.46	352.01	171	3205	3376	2026	1351	6685	2971	9656
High ER	118.36	292.46	142	2663	2805	1683	1122	5554	2469	8023

Evaluating Water Servicing for the Proposed Annexation Area

Assumptions

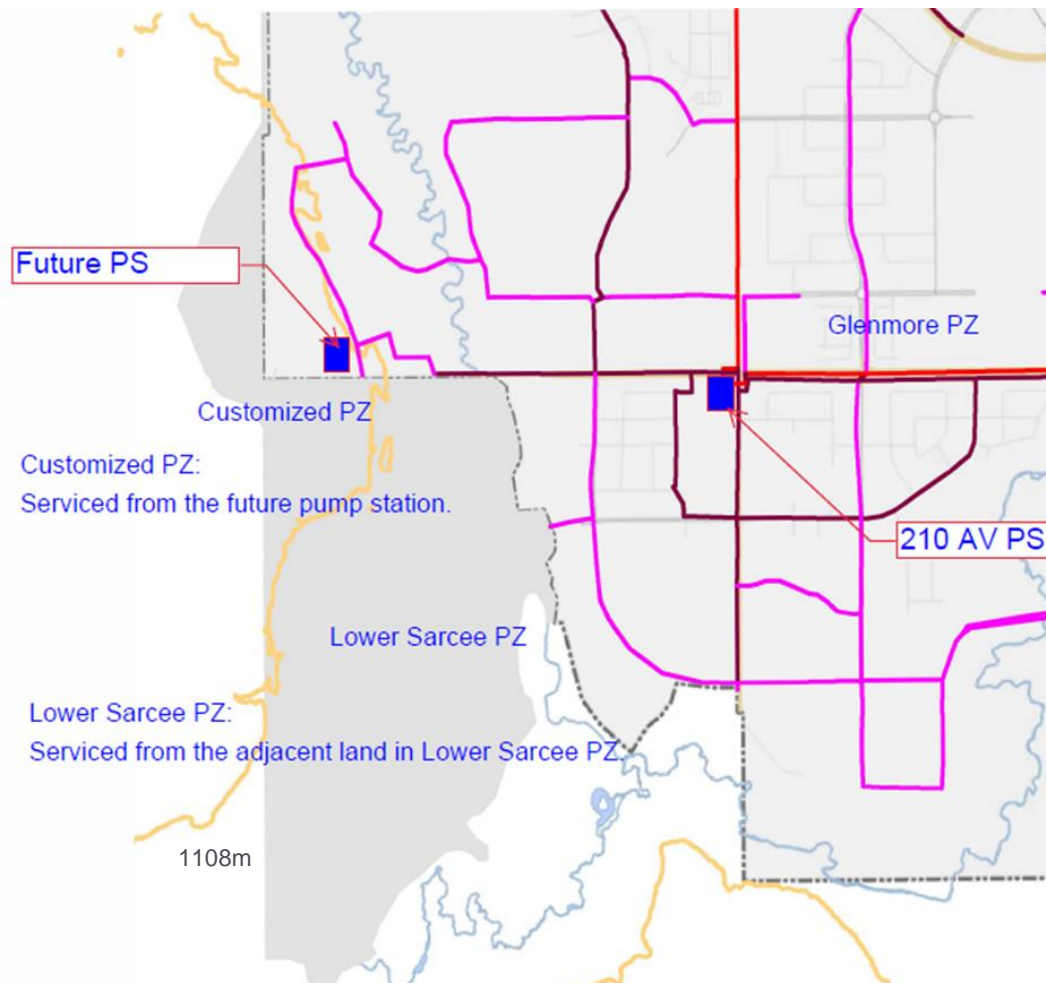
- Per capita maximum day demand (MDD) for future development area – 585 L/cap/day
- There are 2 pressure zones (PZ) within the proposed annexation area: Lower Sarcee PZ and future PZ
- MDD and FF (fire flow)

Results

- Lower Sarcee pressure zone: elevation below 1108m can be serviced via extension to the existing infrastructure for West McLeod ASP land
- Land above 1108m can be potentially serviced by a new pump station (likely Yorkville West pump station (PS))

Cost Impact

- Additional capital funds are expected for the pump station
- Off-site levy to be collected



Evaluating Wastewater Servicing for the Proposed Annexation Area

Assumptions

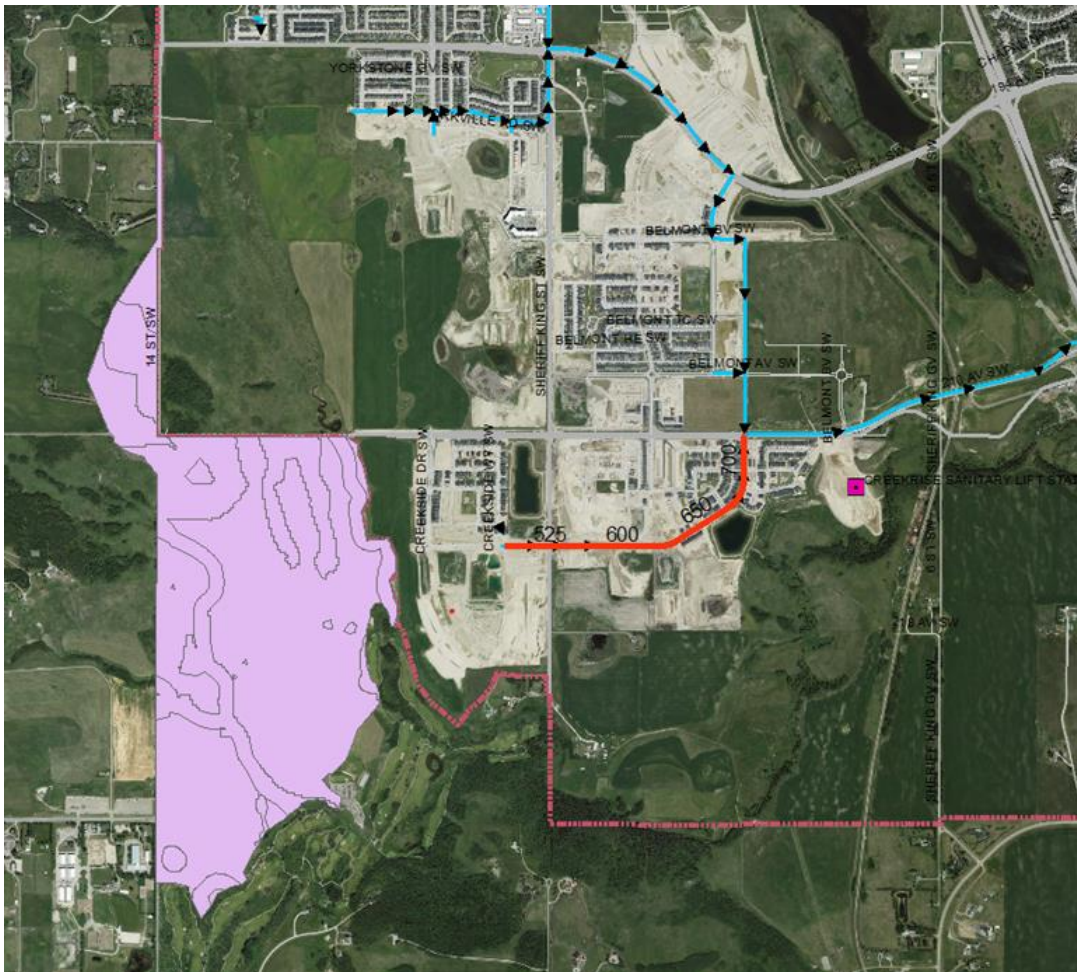
- Per capita consumption for future development area – 274 L/cap/day

Results

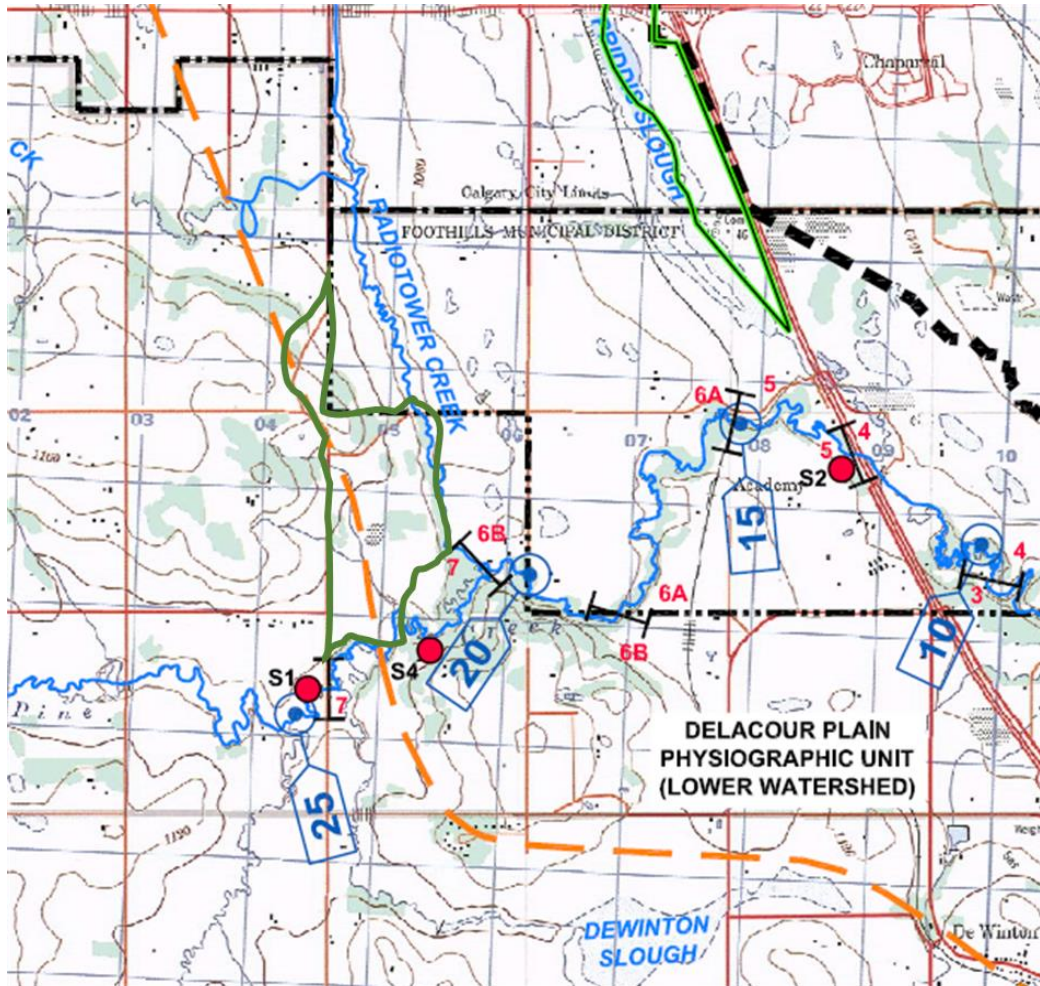
- Existing sanitary trunk (ranging from 525 mm to 1,800 mm diameter) has adequate capacity to service proposed population in annexation lands
- Depending on final grades, site layout, etc., local (developer funded) lift station might be required
- It is proposed to connect the future development to 525 mm diameter sanitary pipe on Creekside Blvd SW
- Alternative servicing could be considered

Cost Impact

- No additional capital (levy-eligible) infrastructure is expected



Evaluating Stormwater Servicing for the Proposed Annexation Area



Proposed Approach

- Potential annexation lands are located in the Pine Creek watershed
- “*Pine Creek Drainage Study*” (AMEC, 2007) describes runoff volume and peak flow controls, to mitigate impacts to Pine Creek as a result of urbanization
- Master Drainage Plan (MDP) will be required at the ASP stage and will be developer-funded

Cost Impact

- No additional capital (levy eligible) infrastructure is expected, as the area has one landowner (to be confirmed through the MDP)

High-Level Cost Estimate for Servicing

Utility	Infrastructure Required	Cost Estimate (2023 dollars)	Developer-Funded or City-Funded
Water	<ul style="list-style-type: none"> Distribution pipes Pump Station Water modelling 	<ul style="list-style-type: none"> TBD \$10-15M Staff time 	<ul style="list-style-type: none"> Developer-funded TBD Developer & City-funded
Wastewater	<ul style="list-style-type: none"> Collection pipes and possibly lift station Sanitary servicing study (SSS) 	<ul style="list-style-type: none"> TBD TBD 	<ul style="list-style-type: none"> All developer-funded
Stormwater	<ul style="list-style-type: none"> Trunk Pipes Pond(s) Master Drainage Plan (MDP) 	<ul style="list-style-type: none"> TBD TBD TBD TBD 	<ul style="list-style-type: none"> All developer-funded

Evaluating Fire/Emergency Servicing for the Proposed Annexation Area

Assumptions

1. Maximum population in Annexation Area 10,000, and West MacLeod Area population projection at 38,362.
2. Coverage extended from a future firehall in West MacLeod Area.
3. Funding for a firehall in the West MacLeod Area approved in the 2023-26 cycle.
4. Emergency access and response coverage based on existing roads.
5. Emergency access to the Annexation Area reviewed in detail at Outline Plan stage.
6. Risk mitigation, if any, determined at Outline Plan stage or further along the development process.
7. Developer follows building and fire code standards.
8. Other service infrastructure in place, e.g., roads, water, etc.
9. South portion of Annexation Area does not meet response or performance standard.

Evaluating Fire/Emergency Servicing for the Proposed Annexation Area

Conclusion

The Annexation Area is serviced primarily from a future West MacLeod Area Emergency Response Station.

Process

Perform analysis for fire and emergency response coverage and determine a suitable location to serve the Annexation Area. Engage necessary stakeholders to determine servicing considerations.

Evaluating Transportation Servicing for the Proposed Annexation Area

- Regional Forecasting Model (RTM) work is underway
- The RTM includes network and land-use assumptions on a regional scale
- A special model run is being undertaken to reflect development of the annexation lands
 - Population based on medium ER scenario
 - A conceptual road network providing access into and within the community was established
 - Extension of planned transit service from the neighboring communities (Yorkville and Sirocco-Pine Creek) included
- The modeling exercise will enable an assessment of the suitability of the existing and planned mobility network to accommodate development of the annexation lands

Conclusions

- All analyses were done for the purpose of understanding The City's ability to service the proposed annexation area
- There are no major concerns for sanitary, stormwater and fire/emergency servicing
- A \$10-15 million pump station is required to service higher elevation area of the annexation area. The pump station would also support Yorkville. Capital funds would be required to build the pump station, which would ultimately be recovered through the off-site levies
- Transportation servicing analysis will be presented to the ANC on September 11, 2023
- Additional studies must be completed to support subsequent planning processes if the lands are annexed