

THE CITY OF DAWSON



COMMITTEE OF THE WHOLE MEETING #CW23-12

DATE: Wednesday Sept 13, 2023

TIME: 7:00 PM

LOCATION: City of Dawson Council Chambers

Join Zoom Meeting

<https://us02web.zoom.us/j/88043951999?pwd=V3piWjEyb25ScHQzQ2x4bENjdnlVZz09>

Meeting ID: 880 4395 1999

Passcode: 622647

1. **CALL TO ORDER**
2. **ACCEPTANCE OF ADDENDUM & ADOPTION OF AGENDA**
 1. Committee of the Whole Meeting CW23-12
3. **DELEGATIONS**
4. **MINUTES**
 1. Committee of the Whole Meeting Minutes CW23-11 of August 30, 2023
 2. Business arising from the Minutes.
5. **BUDGET & FINANCIAL REPORTS**
 1. Report on 2024 Budget Process
6. **SPECIAL MEETING, COMMITTEE, AND DEPARTMENTAL REPORTS**
 1. Public works – Admin Building HVAC Upgrade
 2. Public Works – Boiler Servicing Contract
 3. Planning – Rezoning North End Lots Recommendation
 4. From member through Committee - Report on Sister City MOU
 5. Administration – Meeting Scheduling Recommendation
7. **CORRESPONDENCE**
8. **PUBLIC QUESTIONS**
9. **IN CAMERA**
10. **ADJOURNMENT**



City of Dawson

Report to Council

Agenda Item	Budget Plan 2024
Prepared By	David Henderson CAO
Meeting Date	Sept 13, 2023
References (Bylaws, Policy, Leg.)	Municipal Act Fiscal Policy
Attachments	

	Council Decision
X	Council Direction
X	Council Information
	Closed Meeting

Recommendation

That Council receive the following budget plan for the preparation and adoption of the 2024 Operating and Capital budgets and direct staff to proceed.

Executive Summary

This report outlines the recommended budget plan for preparation and adoption of the 2024 Operating and Capital budgets.

The plan incorporates the following key elements:

1. The preparation and adoption of a 3-year moving Operating Budget.
2. The preparation and adoption of a 5-year moving capital budget.
3. The adoption of a final 2024 Operating and Capital Budgets by December of 2023.
4. A process consisting of
 - a. Draft budget prepared by staff based on:
 - i. existing levels of service
 - ii. Known contracts (ie labour)
 - iii. Expected inflation.
 - iv. Changes already adopted by council or directed by outside agencies and government.
 - b. Scheduling of 2- 4 special Council Budget Meetings in October / November
 - c. Review of Draft Budget based on Departmental Net summaries.
 - d. Review of Departmental details upon request of council
 - e. Amendment and adoption of Budget by council via resolution with the goal of doing so in December
 - f. Adoption of Same budget by bylaw in 2024

Background

Council is required by the Municipal act to adopt a budget by January 1st. Doing so allows expenditures to take place and this first provisional budget is usually a copy of the previous years budget.

Council is also required by the municipal act to adopt an annual operating budget and 3 year capital budget by bylaw , with three readings by April 15th.

In the past year the final reading of the Budget Bylaw missed the legislated deadline and additional time was requested from the Territorial government.

Tenders and requests for quotes for work done in the 2024 construction season should ideally be put out at the start of the year when suppliers have not filled out their work schedule for the upcoming year – doing so results in a greater likelihood of competitive quotes and a greater probability of being able to get the work done in the current year.

Discussion / Analysis

A large portion of the Municipality's anticipated revenues and costs for the coming year can be estimated in the fall of the preceding year with relative accuracy. By applying known contracts, labour agreements, government or agency-imposed changes, and anticipated inflation the baseline budgets for 2024 can be prepared and utilized as the starting point for discussions.

Utilizing the draft operating and capital budgets we can then review via departmental Net Budgets identifying key cost drivers or activity areas. If council members feel they need to take a more detailed look at a particular area, they identify such and a more detailed review is undertaken.

A 3 year rolling operating budget will then be developed off of the first year budget with as many knowns and anticipated numbers as are available. The 3 year rolling operating budget would then be adopted based on the premise that the 2nd and 3rd years are tentative and will be updated annually

A 3 year rolling Capital Budget is currently mandated by Yukon legislation

The Budgets would be adopted by council in January by resolution as the final operating and Capital Budgets.

The Budgets would then proceed through 1st, 2nd and 3rd reading in the new year without discussion

Fiscal Impact

The fiscal impact of this budget plan would be the earlier adoption of a final budget enabling early tendering and contracting plus a greater understanding of operating budget impacts 2 and 3 years out.

Alternatives Considered

1. Maintain the current process of approving an interim budget in December and working through the final budget in January / February / March / April. The downside of which, as noted above, is that the budget is not as effective as a working fiscal tool and inhibits the tendering and purchasing process.

Next Steps

If approved at committee staff will proceed with this plan in developing the 2024 Operating and Capital Budgets .

- Special Council Budget Meetings will be scheduled for October and November
- Starting Draft Budget will be developed on known cost factors

Approved by	Name	Position	Date
	<i>David Henderson</i>	CAO	Sept 10, 2023



City of Dawson

Report to Council

Agenda Item	Contract Award - Administration Building HVAC Upgrade
Prepared By	Asset & Project Manager – Public Works
Meeting Date	Sept 13, 2023
References (Bylaws, Policy, Leg.)	Procurement Policy Yukon Boiler and Pressure Vessels Act
Attachments	Bid Opening Sheet

<input checked="" type="checkbox"/>	Council Decision
<input type="checkbox"/>	Council Direction
<input type="checkbox"/>	Council Information
<input type="checkbox"/>	Closed Meeting

Recommendation

That Council award the Administration Building HVAC Upgrade contract to Borealis Fuels & Logistics for \$480,585.00 plus GST as per their submitted bid.

Executive Summary

Admin Building Boilers require replacement. A request for bids was issued. The Lowest bid is deemed appropriate and recommended for approval.

Background

The City of Dawson boilers in the Administration Building are due for replacement. A payment agreement with the Yukon Government Energy Branch has been secured for a total of \$650,000 and expires on March 31st, 2024. There are approximately \$438,000 left in the TPA agreement for this upgrade. Additional to this contract, the City of Dawson has secured a quote of \$69,000 for the installation of a propane tank and 5-year contract with Borealis Fuels & Logistics for the supply of propane fuel.

An initial RFP was released in June 2024 for this work with one bid received. The bid in question was deemed too high for the work. A second RFP was released in early August with a reduced scope of work.

Discussion / Analysis

The RFP: Administration Building HVAC Upgrades was released on August 18th, 2023 and closed on August 31st, 2023. Three bids were received.

Fireweed Plumbing & Heating submitted a bid totalling \$931,593.00 plus GST for work. Fireweed have extensive experience in the field and have worked with the City of Dawson in the past. Fireweed have also provided a full detailed proposal for the work.

Borealis Fuels & Logistics submitted a bid totalling \$480,585.00 plus GST for work. Borealis Fuels & Logistics have little experience with boiler replacement work but have recently expanded their business to include this service alongside their propane tank installation and propane supply.

Budget Plumbing & Heating inc. submitted a bid totalling \$842,136.62 plus GST for work.

Fiscal Impact

This is a capital project with funding primarily from the Yukon Government Energy Branch with the difference in approved funding to come from Capital reserves and/or additional grant applications. If approved to go forward and deemed to require a budget amendment for sourcing the capital funds from reserves such will be presented to council at the same time as this recommendation.

Alternatives Considered

- To be provided verbally (report format used for initial submission did not include this category)

Next Steps

If approved at committee this recommendation will go to council for final approval

Approved by	Name	Position	Date
	David Henderson	CAO	Sept 10, 2023



City of Dawson

Bid Opening Sheet

Administration Building HVAC Upgrades

Bidder BPH		
Date & Time Received		
Item of Work	Scoring Amount	Bid Evaluated Amount
Fee for Full Scope	60%	34.2
Detailed Project Milestone Schedule and previous project experience	25%	15
Information on completed Bid Forms and within Proposal	15%	15
Total	100%	64.2%
Comments	842,136.00	

Bidder BORRALLIS		
Date & Time Received		
Item of Work	Scoring Amount	Bid Evaluated Amount
Fee for Full Scope	60%	60
Detailed Project Milestone Schedule and previous project experience	25%	15
Information on completed Bid Forms and within Proposal	15%	15
Total	100%	90%
Comments	480,585.00	

Bidder FIREWEED		
Date & Time Received		
Item of Work	Scoring Amount	Bid Evaluated Amount
Fee for Full Scope	60%	31
Detailed Project Milestone Schedule and previous project experience	25%	25
Information on completed Bid Forms and within Proposal	15%	15
Total	100%	81%
Comments		

Bidder		
Date & Time Received		
Item of Work	Scoring Amount	Bid Evaluated Amount
Fee for Full Scope	60%	
Detailed Project Milestone Schedule and previous project experience	25%	
Information on completed Bid Forms and within Proposal	15%	
Total	100%	
Comments		

Opening Date & Time:	
Name	Signature
Jonathan Howe	
Owen Kemp-Griffin	
Kim Martens	



City of Dawson

Report to Council

Agenda Item	City of Dawson Boiler Agreement
Prepared By	Asset & Project Manager – Public Works
Meeting Date	Sept 13, 2023
References (Bylaws, Policy, Leg.)	Procurement Policy Yukon Boiler and Pressure Vessels Act
Attachments	Annual Boiler Service Bid Opening Sheet

<input checked="" type="checkbox"/>	Council Decision
<input type="checkbox"/>	Council Direction
<input type="checkbox"/>	Council Information
<input type="checkbox"/>	Closed Meeting

Recommendation

That Council award the annual Boiler Service 3-year contract to CCI Combustion Control Inc for \$125,198.00 as per their submitted bid

Executive Summary

The Boilers on Municipal Buildings must be serviced annually. The City asked for bids. One bid was received from the current supplier. Staff are happy with the service provided by the current supplier and recommend going forward with their bid for service.

Background

The City of Dawson is required to service fuel fired boilers on an annual basis. CCI Combustion control Inc were the successful bidders in 2022

Discussion / Analysis

The RFP: City of Dawson Boiler Service (3yr Contract) was released on August 1st, 2023 and closed on August 18th, 2023. One bid was received through the bidding process.

CCI Combustion Control Inc. submitted a bid for a total of \$125,198.00 over the next three years. The City of Dawson staff were pleased with the workmanship and service this team provided in 2022.

Fiscal Impact

IF this bid is successful, it will be budgeted in the annual operating budget of the city over the next 3 years. The difference from the previous contracts has not been identified as of the submission of this report although it is not considered material to the decision.

Alternatives Considered

-

Next Steps

If approved at committee this recommendation will go to council for final approval

Approved by	Name	Position	Date
	<i>David Henderson</i>	CAO	Sept 10, 2023



City of Dawson

Report to Council

Agenda Item	North End multi-unit residential development
Prepared By	Planning and Development
Meeting Date	September 13, 2023
References (Bylaws, Policy, Leg.)	OCP, Zoning Bylaw, North End Project Report, Dawson Housing Needs Assessment
Attachments	None

	Council Decision
x	Council Direction
	Council Information
	Closed Meeting

Recommendation

That Council direct Administration to rezone Block B, Smith Addition (North End project) to R2 (multi-unit residential) and to publish a Request for Proposals (RFP) for the construction of multi-unit dwellings on this block.

Executive Summary

The scope of North End Project was reduced to develop five lots for the construction of single family residentials on Block B, Smith Addition. In light of the housing deficit in Dawson and the suitability of these lots for the construction of multi-unit dwellings, it is suggested that the lots be rezoned to R2 and proposals be requested for multi residential development of the property.

Background

The North End project's scope has been reduced to the development of five lots and the infrastructure servicing in 2022. The subdivision application to create five lots has already been approved, and the survey is currently underway. The lots are anticipated to be serviced by next year. The current designation of the proposed lots is R1, which permits the construction of detached single-family homes and duplexes.

The cost of servicing the current plan (extension of services up 2nd) will be approx. \$3 million funded primarily through a TPA with the Yukon Government. Planning for the North End has been ongoing in different formats for more than 10 years. The most recent plans have devolved due to ongoing challenges to investment and development in the North End with the result being that the number of anticipated new lots being marketed and developed has been reduced to the current 5 with the possibility of additional units on the end lots of the block.

The North End Project has been turned over from the Yukon Government to the City of Dawson in 2023. The number of projected new units in 2018 was estimated to be between 20 and 30. At the time of turnover the estimated new units is between 5-7. Additional costs incurred by the project will be the responsibility of the City of Dawson.

Project evaluation reports including community feedback dating from 2018 identify a preference for a mix of single detached and tiny homes across the entire project area. The project area for new housing development is now narrowed to one city block on Front Street that has been identified as geologically appropriate for multi residential.

Discussion / Analysis

Following are the criteria upon which the recommendation was made.

Conformity with the OCP and ZB

OCP acknowledges housing as a major concern and confirms that housing needs are not being met. Among the implementation strategies, OCP suggests encouraging the development of a variety of housing types to satisfy the needs of Dawson's diverse population.

The parcels are designated as UR (Urban Residential) in OCP which comprises primarily of low- and medium-density residential uses.

The parcels in Zoning Bylaw are currently zoned R1 (Single Detached and Duplex Residential). The rezoning of parcels to R2 (Multi-Unit Residential) would permit the construction of apartments, townhouses, and multi-unit residential structures. The parcels meet the minimum size requirement of 5,000 square feet.

Cont....

Housing needs and affordability

Housing Needs Assessment submitted to Yukon Housing Corporation in 2021 indicates that “All available evidence and information consistently indicates that housing availability is a significant systemic issue across the housing continuum in Dawson”.

S.6.2 of the study states that “Informants identified that **the need for larger family housing was minimal**, and that this cohort was prioritized by both Tr’ondëk Hwëch’in First Nation and YHC. **Smaller housing units were identified as a gap, with a particular need for housing for single adults.**” Furthermore, the study identifies the need for housing for vulnerable individuals: “There was a strong consensus that many of the adults in need of housing were vulnerable, particularly single young adults.”

Geotechnical studies

S. 2.4.1 of the [North End] Final Report (June 2018) provided by Groundswell Planning mentions that “Optimum subsurface conditions were found in the vacant Front Street block; in fact, this portion of the planning area was the only one identified as being conducive to concrete slab-on-grade construction and accordingly – larger multi-unit and/or storey buildings.”

Promoting a walkable city

These properties would be among the last vacant, serviced, developable lots within the historic townsite (due to restrictions imposed by the river and hills). The Taxation of Vacant Residential Lands was one of the final initiatives to create more housing in the historic townsite. The administration is confident that rezoning the parcels in the North End will increase the predictability of the creation of more housing units. It would be prudent to create more units out of these five lots considering the OCP’s intention to preserve a walkable community and to encourage the use of non-motorized transportation.

Compatibility with surrounding development

The North End lots are situated between R1 and C1 parcels. The majority of Front Street parcels are zoned C1 (Core Commercial) and P2 (institutional) which are compatible with the R2 zone (note that multi-unit residential is also permitted in the C1 zone).



Compatibility with the Character Area

The parcels are in North End Character Area. According to the *Heritage Management Plan*, “this area was a secondary residential district in Gold Rush days” and “contains a wide variety of types of single-family and multiple residential buildings”.

Fiscal Impact

1. Rezoning should not materially affect the cost of servicing.
2. Multi residential units will result in greater annual taxation and Utility payments to the municipality.
3. Intensification results in higher efficiency in providing municipal services – ie service to a greater number of units and people for a lower cost per unit or person allowing cost containment
4. Greater number of people living in the downtown core within walking distance of services and employment reducing reliance on cars, parking spaces and related municipal services.

Alternatives Considered

1) Do not change the zoning; 2) rezone specific lots; and 3) rezone the lots to C1 (Core commercial) to encourage commercial and residential mixed use.

Next Steps

If Council approves the recommendation, administration will initiate the rezoning process and draft an RFP.

Approved by	Name	Position	Date
	<i>David Henderson</i>	CAO	Sept 10, 2023



Final Report



Submitted to



By

Groundswell Planning

In association with

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MORRISON HERSHFIELD

Across the River Consulting

Monarda Communications

**UNDERHILL
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CHILKOOT GEOLOGICAL ENGINEERS LTD.

JUNE 2018

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G	Housing Best Practices
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I	Class 'C' Cost Estimate

Cover image credits: Historical photos courtesy of Parks Canada

Executive Summary

In order to address the significant housing pressures Dawson City is experiencing, the Government of Yukon and City of Dawson are working jointly to explore the potential for developing new residential lots in the North End area of the Historic Townsite. A series of background investigations were conducted between 2016 and 2018 to determine, at a broad scale, the feasibility of developing the North End. The results confirmed the overall suitability of the area and both parties elected to advance the project with conceptual planning in 2018.

A multi-disciplinary Planning Team led by Groundswell Planning initiated the North End planning process in February 2018. The purpose of the North End Plan was to determine:

1. Relevant housing best practices for the City to incorporate into the new development;
2. The location, number, and size of new lots;
3. Proposed servicing (sewer and water) and road access for new lots;
4. Related community amenities;
5. Zoning and/or other provisions required to develop the area;
6. Estimated costs of development and potential for cost recovery; and
7. A long-term development plan and implementation approach.

The North End planning area comprised over 100 lots dating back to the original 1898 townsite survey, approximately 35 of which are privately owned and/or occupied. The majority of the remaining lots are titled to the City of Dawson. The area was densely occupied during the Gold Rush era but was the first section of the Historic Townsite to depopulate in subsequent decades, resulting in the sparsely populated, predominantly vegetated neighbourhood that exists today.

The North End area is subject to a number of development constraints of varying complexity, including:

- Challenging geotechnical conditions, including permafrost, downslope movement of colluvial materials, and several geohazards (i.e. the Moosehide Slide and a debris flow channel);
- Heritage resources, including 23 registered historic sites and 79 tent platforms and a cemetery dating back to the Klondike Gold Rush;
- Numerous encroachments involving City lots, road right-of-ways, and laneways by private property owners in the area;
- Potential environmental contamination of public lands from on-site and off-site sources; and,
- Lack of municipal water or sewer infrastructure, including to currently occupied lots.

The North End holds special values, particularly for those living in the area. These values include the North End's natural and "off-the-beaten-path" character and the heritage resources situated throughout it. The broader community appears to have a strong interest in purchasing potential lots in the North End should they become available. A "successful" North End development, according to the public and City of Dawson Council, would exercise caution around geohazards, provide a range and mix of housing, uphold historic character, efficiently use land, and service the area. The central planning challenges that emerged –

notwithstanding the numerous development constraints – were around appropriate density, achieving a balance between greenspace and new lots, and minimizing impacts to existing property owners. Numerous property owners have a strong interest in resolving their encroachments and the opportunity to enlarge their lots and/or purchase new adjacent lots should they be developed.

After two rounds of design and input from both Council and residents, the Planning Team created a final concept for the North End that would facilitate the development of 28 new residential lots (10 small, 12 medium, and 6 large), create a pilot micro-housing project on City leased land, and involve the reconfiguration and consolidation of numerous privately titled lots in the area to allow for adjacent development and/or address longstanding encroachments. A continuous corridor of greenspace would be retained between Second and Third avenues and a municipal historic site enhanced as a neighbourhood and community park amenity.

Access to new lots in the Typhoid Cemetery/Third Avenue area would be achieved via a new one-way access road and Third Avenue and Edward Street would be closed, with a portion retained for pedestrian access. The steep topography between Second and Third avenues and recommended avoidance of cut-and-fill road construction techniques necessitates the introduction of significant amounts of fill both to construct the new roadway and re-grade Second Avenue and adjacent private accesses. The determination of a final road alignment will require more detailed geotechnical investigation should the project proceed.



Dawson North End final design concept

Servicing the new development and existing properties in the area would be achieved via the extension of the City of Dawson’s current “dead-end” watermain along Second Avenue and the new roadway and the relocation of the associated bleeders. This approach has the lowest capital cost but lifecycle costs should be

considered, particularly around energy use for the bleeder system, prior to a final decision. Sewer lines would be installed in the same trench and tie-in to existing sewermain manholes on Second and Third avenues at Edward Street.

The North End servicing concept and accompanying Class 'C' cost estimate broke the development out into three nodes as follows:

- **Node 1** – 16 new and two (2) existing privately owned lots in the Front Street block and Second Avenue area (in the vicinity of Edward and George streets);
- **Node 2** – Three (3) new and 10 existing privately owned lots¹ situated along the north end of Second Avenue and Judge Street;
- **Node 3** – Nine (9) new lots and five (5) existing privately owned lots between Second and Third avenues.

The development of all three nodes is projected to cost a total of \$3.9 million dollars and generate about \$2.8 million dollars in lot sales and Local Improvement Charges, leaving a shortfall of approximately \$1.0 million to be bridged via a public subsidy and/or other funding. The development of Nodes 1 & 2 presents a more favourable financial picture, with a funding shortfall of \$315,800. Node 1 development is projected to run at a deficit of \$139,400. All three financial scenarios are predicated on the assumption that existing property owners support the application of a Local Improvement Charge to contribute towards the cost of servicing their lots.

	Node 1	Nodes 1&2	Nodes 1-3
New Lot Sales	16	19	28
Existing Lots Serviced	2	12	17
Total Costs	\$1,439,400	\$2,185,800	\$3,922,500
Total Revenues	\$1,300,000	\$1,870,000	\$2,870,000
Funding Required	\$139,400	\$315,800	\$1,052,500
Subsidy Per New Service Connection	\$7,744	\$10,187	\$23,389

Proceeding with North End development will require follow-up field investigations and preliminary design work, along with negotiations with individual property owners around encroachments and servicing. Regardless of a decision to develop, the City of Dawson will need to address its now known environmental liabilities in the North End, relocate a portion of Front Street encroaching upon private property, and resolve longstanding encroachment issues with residents for the sake of good governance.

Recent private sector development of residential lots in the Dawson City Historic Townsite and examples in other Yukon communities suggest that North End development costs could be reduced, and local benefits increased, by employing an alternative development model utilizing small local subcontractors working under the direction of a Construction Manager. The co-achievement of servicing upgrades and new lot development further suggests the eligibility of the North End for infrastructure funding. Furthermore, the major infrastructure works currently underway in the community could create a timing and cost savings opportunity. Both governments should actively consider and explore such measures to optimize the appeal, timeliness, and affordability of future North End residential development.

¹ The servicing concept assumes that fourteen currently surveyed and privately owned lots are consolidated, resulting in ten private lots.

1.0 Introduction

Dawson City is situated in the Traditional Territory of the Tr'ondëk Hwëch'in (TH), at the culturally, historically, and ecologically rich setting of the confluence of the Klondike and Yukon rivers in central Yukon. The City of Dawson municipality has a population 1,375-strong (Statistics Canada, 2017) and serves a population of 2,229 (Yukon Bureau of Statistics, September 2017) when peripheral rural subdivisions are included.

Dawson is growing rapidly and experiencing acute shortages of suitable housing and availability of land for building. Specific local constraints pose challenges to bridging the housing gap, including topography, peripheral industrial and mining activity, and the high cost of expanding and operating service infrastructure in a remote location. The 2012 Official Community Plan (OCP) set out a direction for a more compact urban form to promote both financial and environmental sustainability amidst these population growth pressures. Facilitating the ability of Dawson residents to live, work and play in close, walkable proximity to amenities and services is central to the achievement of the OCP's direction.

The North End of Dawson City is one of the last substantial opportunities for new serviced residential lots within the Historic Townsite. The area was densely occupied during the Klondike Gold Rush era but was the first section of the town to depopulate in the subsequent decades. Today, the area is home to over a dozen residences, many of them historic. The remainder of the area has transformed over time into greenspace, the evidence of its former occupation remaining in the form of various artefacts.

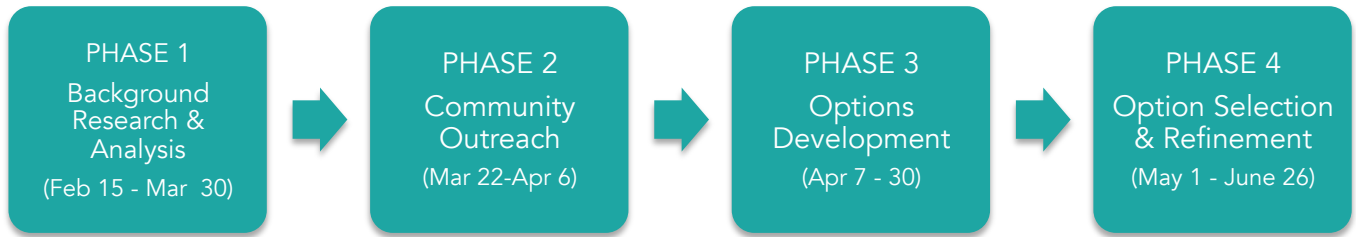
In the interests of meeting growing demand for new residential lots, the Government of Yukon and City of Dawson committed to working jointly to explore the potential for North End development via a Project Charter in 2016. The Government of Yukon initiated a series of background investigations into the North End between 2016 and 2018 to determine, at a broad scale, the feasibility of developing the area for residential lots. The results confirmed the overall suitability of the area, as well as specific development challenges requiring mitigation, and the City of Dawson and Government of Yukon committed to take the next step: creating a conceptual plan for a residential development in the North End.

A multi-disciplinary Planning Team led by Groundswell Planning of Whitehorse, Yukon, initiated the North End planning process in February 2018. The purpose of the North End Plan was to determine:

8. Relevant housing best practices for the City to incorporate into the new development;
9. The location, number, and size of new lots;
10. Proposed servicing (sewer and water) and road access for new lots;
11. Related community amenities;
12. Zoning and/or other provisions required to develop the area;
13. Estimated costs of development and potential for cost recovery; and
14. A long-term development plan and implementation approach.

1.1 Methodology

The North End Plan was developed via a four-phase process between February and June 2018. Each phase is briefly described here.



Phase 1 - Background Research & Analysis

The initial phase was dedicated to the review of background reports undertaken for the North End area, including:

- Geotechnical evaluation
- Geohazard assessment
- Phase 1 Environmental Site Assessment
- Heritage Resources Overview Assessment
- Heritage Resources Impact Assessment
- Preliminary civil/servicing design

On the basis of document review and selected interviews, the Planning Team delineated low, medium, and high potential areas for development and outlined potential mitigation measures. Desktop reviews of Dawson housing market conditions and housing best practices were conducted, the former resulting in a hypothetical customer profile from which target lot prices could be formulated. In addition, the Team worked with Council to develop a draft set of “success criteria” that was intended to guide the development of the draft concepts and ultimately support the selection of a final option.

Phase 2 - Community Outreach

With development constraints and potential delineated, the Planning Team engaged with Dawson City residents and stakeholders over a two-week period to understand values for the planning area and community issues, interests, and ideas. The Team also sought specific feedback on Council’s draft “success criteria” as well as market demand for housing in the North End. The Planning Team visited Dawson City for resident and stakeholder meetings from April 4-6, 2018.

Phase 3 - Options Development

The Planning Team synthesized both community input and key development constraints to create two conceptual designs for a North End development. The housing potential and advantages and disadvantages of each concept were described. The Team developed a preliminary servicing scheme and calculated associated capital cost and cost recovery potential for review by Council.

Phase 4 – Options Selection & Refinement

In the final project phase, the Planning Team presented its draft concepts to the broader community and Council for input and direction via an online survey in early May and Committee of the Whole meeting on May 15, 2018 (to which North End residents were invited). This initial review resulted in direction to the Team to refine one of the original concepts to better address public and resident input. The Team returned to the drawing board and created several variations of the concept, which were presented for public and Council review and input at a Committee of the Whole meeting on June 19, 2018. Council approved the final concept and associated reporting on June 26, 2018.

2.0 Overview of the Planning Area

The North End planning area is located in the northern end of the Historic Townsite of the City of Dawson and within the Traditional Territory of the Tr'ondëk Hwëch'in (TH). The planning area encompasses approximately 7.4 hectares of primarily undeveloped land situated between Front Street and Third Avenue along the east-west quadrant and Edward Street and the "mud bog" event area/City snow dump along the north-south quadrant.



Figure 1. Orthophoto of the planning area and boundaries

2.1 Land Tenure

The North End planning area is primarily undeveloped at present but consists of about 100 lots – virtually all 50x60 feet in dimension – dating back to the original 1898 townsite survey. The majority (approximately 80) of the surveyed parcels within the area are titled to the City of Dawson. About 35 surveyed parcels are under private ownership – three of them sharing tenure with the City of Dawson. In addition, 17 or so parcels are untitled Yukon Commissioner's lands, held for the purposes of a Yukon River bridgehead reserve and the Third Avenue (or "Typhoid") Cemetery. There are no TH Settlement Lands located within the planning area.

The area's gradual depopulation in the early to mid-20th century resulted in the naturalization of not only surveyed lots but also a historic road right-of-way. Historic Third Avenue (also called Steele Avenue) was once situated between Front Street and present-day Third Avenue (or surveyed Fourth Avenue).

2.3 Municipal Servicing

2.3.1 Sanitary Sewer Servicing

The existing sanitary sewer collection in Dawson is a conventional gravity collection system consisting of sewer mains and manholes that flow by gravity to either a lift station or directly to the wastewater treatment plant. When the sewer flows to a lift station, the lift station pumps the wastewater to a point in the collection system where it can flow by gravity to the wastewater treatment plant.

Installing sanitary sewer service into the North End area would require tying into the existing manholes on either Second Avenue or Third Avenue at Edward Street, both of which flow into the York Street lift station. The preferred tie-in location will be determined based on the elevation of the sewermain at the manholes (invert of the pipe) to ensure the system can flow by gravity, as well as the length and configuration of the sewer mains required to complete the tie-in.

From a capacity perspective, the York Street lift station is currently being replaced and it is the Team's understanding that the new lift station has included sufficient capacity to service the North End area. It is unlikely that the capacity of the gravity collection system and lift station will be exceeded in the event of future North End development; however, the capacity of the collection system and lift station should be confirmed as part of any further design.

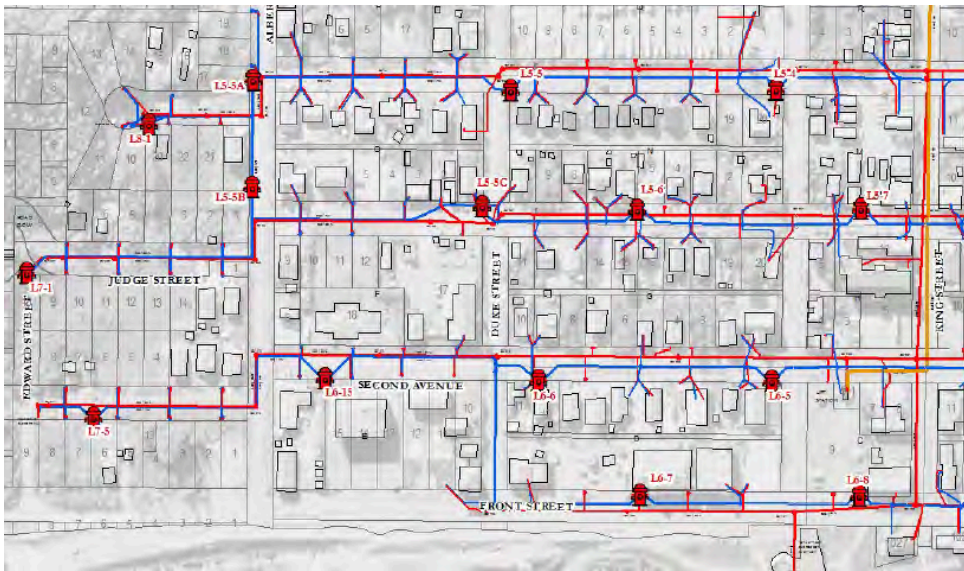


Figure 3. Diagram of the City of Dawson water and sewer collection system in the North End (red indicates sewer; blue indicates water)

2.3.2 Water Servicing

The existing water distribution system in Dawson is unique to a northern climate in that it relies on continuous flows through the water mains for freeze protection.

Typical water distribution systems that experience temperatures below freezing (0°C) bury water mains below the depth of frost; however, the presence of permafrost in Dawson rules out the option of burying the water mains at a depth that is not

susceptible to frost/freezing. For this reason, the water mains in Dawson are shallow buried (buried within the zone that experiences seasonal frost in the winter) and the distribution system is designed to maintain flow in the water mains for freeze protection. Treated well water (i.e., water source) enters the main pumphouse at around 2°C and is heated to around 10°C . The heated water is then pumped to circulate water through the looped distribution system to maintain a temperature of around 5°C . The recirculated water that returns to the pumphouse is blended with the treated well water and reheated to 10°C as part of the circulation pumping operations.

The original water system was designed with six (6) watermain loops that start and end at the main pumphouse. Pumps in the pumphouse circulate flow in each loop. The loops of the original system provided water servicing as far north as Duke Street. In subsequent years, watermains that branched off the loops were installed to service the areas north of Duke Street. These branches are not part of the loop and therefore water is not circulated in these lines from pumping operations at the pumphouse. Bleeders connected to the sanitary sewers at the dead-end of the watermain (end of each branch) were installed to maintain continuous flow through the watermain. The bleeders at each dead-end are turned on in the fall when temperatures drop below freezing and are turned off in the spring/summer when the frost in the ground around the watermains melts.

To extend water servicing to the North End planning area, the existing dead-end watermains on Third Avenue and Second Avenue that terminate at Edward Street would be extended and the bleeder moved to the new dead-end of the watermain. Alternatively, the watermain loops may be extended. The main advantages of proceeding with looped water servicing include reduced bleeder flows, which contributes to reduced heating costs at the pumphouse and treatment requirements at the wastewater treatment plant, and increased system servicing redundancy in the event of a watermain failure. In a failure scenario, the looped watermain option can supply water in both directions to maintain flow to a larger area compared to a dead-end watermain in which the downstream section of the watermain will run out of water.

2.4 Site Conditions

The following section provides a brief summary of the background investigations commissioned for the North End area commissioned by the Government of Yukon. Report recommendations relevant to a future development plan and implementation are included in Section 11.0 Implementation. Readers are encouraged to refer to the source document for further detail and/or explanation.

2.4.1 Geotechnical Conditions

A geotechnical evaluation undertaken by Chilkoote Geological Engineers Ltd. found that approximately 40% of the surveyed and undeveloped lots in the planning area are suitable for development from a terrain and soil condition perspective. Both fluvial and colluvial deposits (as well as fills) are prevalent in the study area in a predominantly frozen state and are undergoing periglacial, mass wasting and/or thaw degradation processes. In addition, differential and downslope movement of colluvial materials near the toe of the Moosehide Slide and its confluence with adjacent fluvial materials could result in increased maintenance challenges and/or risks to future property owners in some portions of the planning area.

Optimum subsurface conditions were found in the vacant Front Street block; in fact, this portion of the planning area was the only one identified as being conducive to concrete slab-on-grade construction and accordingly – larger multi-unit and/or storey buildings.

Naturally occurring asbestos may be encountered in the area as the use of crushed asbestos rock for road fill is known to have occurred in the past in Dawson City and the Moosehide Slide debris is comprised of serpentized rock that may harbour asbestos. This issue adds complexity and potential risk of exposure during installation of deep utilities. This challenge has been successfully mitigated for the municipal servicing projects currently underway in Dawson and these “lessons learned” can be applied to any North End development.

The report concluded that while North End soil types and conditions pose additional geotechnical challenges relative to standard infrastructure design and construction, they are reasonably consistent with baseline conditions elsewhere in the townsite and can largely be mitigated. The presence of permafrost necessitates the

minimization of thermal and physical disturbances to both surficial and subsurficial materials and the processes affecting them. Granular pads, lot access, and individual lot drainage requirements will need to be carefully considered in order to control surface drainage and minimize disturbance to underlying soils.

The geotechnical evaluation report recommended a 30-meter setback from the toe of the Moosehide Slide as a measure of insurance both from geohazards and higher rates of downslope movement. The 30-meter setback was based on a 150-year development horizon. The portion of the east-west setback extending from Third Avenue to Front Street also coincides with the discharge path of an erosion gully (see Section 2.4.2). In subsequent conversations with the report's author, the geotechnical setback was qualified as a best practice versus rigidly fixed entity. Please refer to Appendix A for a base map of the project area illustrating the recommended setback.

2.4.2 Geohazards

A geohazard assessment conducted by Chilkoot Geological Engineers Ltd. was preliminary and qualitative in nature and intended to qualitatively estimate the probability of occurrence and level of severity of any identified geohazard. The Moosehide Slide was the primary focus of the geohazard assessment undertaken. The Moosehide Slide is believed to have resulted from a one-time rock slope or wedge failure associated with a combined high porewater pressures and a seismic event. The presence of an unstable block of soil and rock near the headscarp of the slide has been previously identified; the study focused on characterize the slide features in order to better understand associated failure mechanisms.

The movement of the lower portions of the Moosehide Slide are attributed to rock glacier mechanisms, while movement in the upper realms of the slide appear to be associated with earth flow mechanisms. Downslope movement of the slide has been monitored and up to 20 centimeters of annual creep has been recorded in some areas of the slide. The probability of the unstable block failing and propagating to developed areas is considered extremely remote; however, permanent development in the former mission/hospital site (currently the City snow dump and summer event area) is discouraged to achieve a factor of safety.



Figure 4. Moosehide Slide (Credit: Parks Canada)

In addition to the Moosehide Slide, the study identified the presence of additional geohazards in the form of an erosion gully and previously poor slope conditions in the Third Avenue/Judge Street portion of the planning area. The discharge area of the gully and slope was pinpointed to the planning area. However, the study noted that the state of natural revegetation promotes increased overall slope stability.

Overall, the study concluded that the geomorphic conditions within the study area facilitate continued residential development in the North End subject to upslope monitoring, avoidance of development within a prescribed 30-meter setback from known potential geohazards, and follow-up modeling of the unstable block.

2.4.3 Heritage Resources

A Heritage Resources Overview Assessment and follow-up Heritage Resources Impact Assessment (HRIA) were conducted by Ecofor Natural and Cultural Resource Consultants (Ecofor) in the planning area to better quantify and qualify heritage values in the planning area. These studies found significant heritage resources, including:

- 23 previously recorded sites documented in the Yukon Historic Sites Inventory (YHSI);
- 79 historic platforms/features (believed to be old wall tent platforms)
- The Third Avenue/Typhoid Cemetery area and associated potential for unmarked burials outside of the surveyed graveyard boundaries; and
- Potential for buried and ground surface heritage resources throughout the planning area.



Figure 5. Paul Denhardt cabins

The report recommended avoidance of disturbance to and/or excavation of any heritage resources, on-site monitoring by an archaeologist if ground-disturbing impacts can't be avoided, and Systematic Data Recovery excavations for the historic platforms/features. Yukon Historic Sites Unit was contacted by the Planning Team to discuss options around the historic tent platforms and expressed a willingness to assist the City of Dawson in mitigating these impacts in a cost-effective manner. The Planning Team also met with the City of Dawson Heritage Advisory Committee to understand their interests and expectations. The Committee emphasized their preference for retaining the historic streetscape.

There are several other heritage values present in the planning area worth noting. One is the Paul Denhardt cabin complex, located on Lot 4 Block F. The three buildings have been declared a Municipal Historic Site by the City under the *Historic Resources Act*. The other is the gravesite of Father Judge, located on Lot 31 in the northwest corner of the planning area.

2.4.4 Contamination

Associated Environmental Consultants conducted a Phase 1 Environmental Site Assessment (ESA) for the planning area to determine the potential for environmental contamination that could impact future residential development. The ESA identified four on-site Areas of Potential Environmental Concern (APECs) and five off-site APECs. The on-site APECs relate to historic occupation by Standard Oil Company, use of possible embalming agents, a possible oil spill, and scattered and buried debris. A Phase 2 ESA is recommended to further confirm and/or delineate these APECs.

2.4.5 Encroachments

A key constraint to orderly development in the North End is the large number of existing encroachments. The general nature of these encroachments is categorized and described below.

Encroachments Involving Roadways/Laneways	Encroachments Involving Surveyed Lots
<ul style="list-style-type: none"> • Traveled roadway encroaching on private property • Dwelling encroaching on right-of-way of active roadway • Dwelling (historic and non) encroaching on surveyed but inactive road right-of-way and/or laneway • Accessory structure encroaching on active road-right-of-ways and laneways • Accessory structure encroaching on surveyed but inactive road-right-of-way and/or laneway 	<ul style="list-style-type: none"> • Dwelling substantively situated on private parcel with encroachment on City-owned land • Dwelling situated entirely on City parcel without permission • Dwelling on private lot extending onto adjacent lot under the same ownership, non-conforming to Zoning Bylaw • Dwelling on privately owned lot encroaching on an adjacent lot under different private ownership

The Planning Team heard repeated mentions of septic fields being located off of private property boundaries and/or under roadways but confirmation was outside the scope of its work.

One specific area of encroachments – Block G in the southeastern portion of the planning area - poses a significant challenge and warrants more detailed explanation here due to its influence over the final design concept. Three private property owners are implicated as follows:

1. Property Owner #1 – Property Owner #1 has title to portions of Lots 3 & 4 (Block G). The remainder of Lots 1-6 (Block G) is titled to the City of Dawson. The owner’s residence (included in the YHSI) is located in the (surveyed) Third Avenue right-of-way (ROW) and the City’s Lot 4. An accessory building, also included in the YHSI, is currently used for business purposes and is located to the north of the main residence on Lot 5 (City land). An unsurveyed minor road accessing the shop and residence runs through City-owned portions of Lots 1-5, the private portions of Lots 3-4, and minor portions of the City’s surveyed laneway. The business is light industrial in nature and may not conform with the Zoning Bylaw.
2. Property Owner #2 - Property Owner #2 owns Lots 9 & 10 (Block G). A cabin listed in the YHSI occupies portions of both lots and encroaches on the surveyed public laneway and Third Avenue right-of-way. The owner is believed to park in the Third Avenue ROW to the south of the residence.
3. Property Owner #3 – Property Owner #3 owns Lots 7 & 8 (Block G). There is another YHSI listed structure on Lot 7. There are no building encroachment issues; however, the main access for this owner is via (surveyed) Fourth Avenue and the property’s main parking access in the ROW.

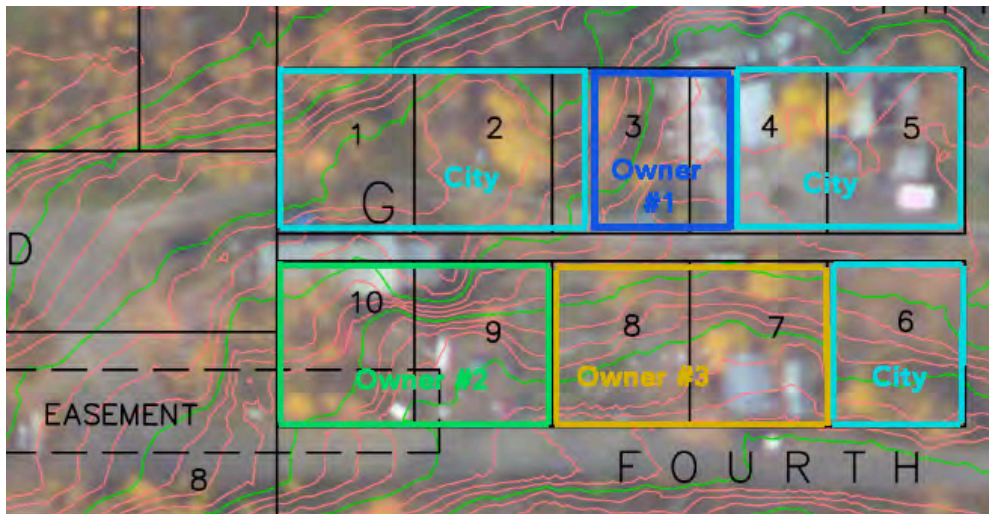


Figure 6. Typhoid Cemetery area property ownership and encroachments

2.4.6 Developable Areas

Of all the development constraints, geotechnical and geohazard issues - in combination with recognized historic sites – were felt to pose the most significant limitations. As such, the report, *Geotechnical Evaluation Proposed North End Subdivision* (Chilkoot Geological Engineers, 2016) and several conversations with its author (also a Team member) were invaluable to the determination of development potential across the planning area.

The Team synthesized all of the background information and categorized North End lots and other candidate areas as having good, marginal, or low development potential. For the most part, the Team’s categorization of development potential adhered to the geotechnical evaluation results, in particular the report’s Figure 10 and

accompanying write-up. However, in a few instances, the Planning Team’s assessment deviated slightly from the geotechnical report recommendations as follows:

Area 18 – The report recommends a 30-meter wide geotechnical setback from the toe of the slide through this zone as the toe will encroach into it over the (approximate) 150-year development horizon. It further recommended that a shallow lined and armoured ditch be constructed along the entire toe of the slide debris to channel surface water from Area 17 towards a discharge at Front Street. During subsequent discussion, the report’s author indicated that this setback could potentially be relaxed up to a maximum of 15 metres.

Area 21 – The report recommends that residential development not be allowed on Lots 2 and 13 Block C due to their proximity to the leading edge of the slide debris and associated pronounced rates of movement. In subsequent discussion, the report’s author communicated that the lots could be suitable for non-permanent dwellings and/or a public building where the City was assuming the liability for increased building maintenance.

Area 24 – The lots in this area were deemed suitable for lot development but 4 Block F was eliminated from consideration due to the presence of the Paul Denhardt Cabin Municipal Historic Site.

Area 29 – The lots in this area were deemed suitable for lot development but the combination of steep bedrock terrain and preference for keeping the cemetery slope and associated platform structures intact led to the determination of low development potential.

Area 38 – The report states that Lots 1 and 2 Block G are unsuitable for development due to the steep slope their westerly portions encompass. In subsequent discussions, this finding was revised. The bench at the top of the slope in question is considered potentially suitable for development; the limited developable area is a planning and lot configuration challenge versus geotechnical one.

A working map was created highlighting good and moderate development potential and is included in Appendix B.

Figure 7. Figure 10 from *Geotechnical Evaluation Proposed North End Subdivision* (Chilkoot Geological Engineers Ltd.)



3.0 Market Context & Customer Profiles

3.1 Housing Demand

The broader community context for the North End Plan is important to understand. Dawson is growing rapidly, with 18% more residents in 2017 than in 2010. Official population projections expect this trend to continue, adding another 510 people by 2030. This combination of land scarcity, high development costs, and strong population growth have created a “perfect storm” of housing pressures. Median rents have risen over 30% in the last 3 years and vacancies are at or near zero. The cost of a serviced lot has risen 500% in 10 years, from \$15,000 in 2009 to near \$80,000 in 2018. Building costs are currently pushing past \$250/ft².

Financial constraints to home ownership affect many Dawsonites. Dawson’s economy is prone to seasonal swings and household incomes are 19% lower than the Yukon average; nonetheless, the cost of living is 16% higher than in Whitehorse. 20% of households have a total annual income under \$30,000. These realities pose barriers to obtaining mortgage financing for new home construction for some, which may be a cause for significantly lower rates of home ownership in the community².

The acute shortage of appropriate housing has been repeatedly raised in community economic and needs surveys since 2011. Both the 2017 Household Survey (133 responses) and the 2017 Business Retention and Expansion Survey (33 interviews) conducted by KDO again confirmed housing as the top priority for improving Dawson and strengthening the economy, ahead of recreation, transportation, infrastructure or other investments.

- In the most recent 2017 Housing Rental & Ownership Demand Survey (130 responses):
 - Only 55% of renters are satisfied their housing needs are being met
 - Rental need is dominated by ‘affordable’ single-person units with access to laundry
 - 44% of renters are planning to build a home to own in the next 5 years, and 36% are contemplating the same
 - A large portion of residents who would like to build a home indicated they can not afford to do so given current market land prices and construction costs.

Analysis of the socio-economic context and official demographic projections informs a 2030 forecast of additional new housing needs of 160 rental and 105 owned units as follows:

	Total	TH	Target	Ownership	Rental
1-bedroom	190	40	150	25	125
2-bedroom	115	25	90	55	35
3-bedroom	30	5	25	25	
Total	335	70	265	105	160

(Please note that Tr’ondëk Hwëch’in (TH) citizens comprise approximately 21% of the Dawson population. This need is separated out to allow for the supply of the TH government housing programs, although less ownership is expected in this segment as the TH home ownership programs are in their infancy and will take time to grow.)

Interestingly, the strong demand for rental housing has not translated into significant private sector opportunities yet. Given the high cost of construction, a traditional business case to build multi-unit housing at market rents is

² Home ownership rates are at 46% for Dawson residents, much lower than the Yukon average of 66%.

difficult to make in this small, remote location where exit strategies for investors are extremely limited. Banks are wary to lend and even social enterprise housing developers such as Klondike Development Organization (KDO) that utilize government grants need public guarantees to access loans. However, the example of the recent successful first KDO 8-plex project has stimulated others to explore the potential with these government funding supports.

Four multi-unit projects are in different stages of progression in the Downtown Core and although still encountering challenges, will provide 30-40 new rental units if completed. The necessary government funding supports for these include 10-year City of Dawson tax rebates and a Yukon Housing Corporation Municipal Matching Grant, and Council policy offers these exclusively for development in the Downtown Core as it seeks to incentivize revitalization of vacant sites in that area. In addition, other large properties in the Historic Site are also suitable and may soon be made available for multi-unit residential development, including the former Korbo Apartments and Alexander McDonald Lodge sites. There should be sufficient sites outside of the North End Planning Area for the foreseeable pace of multi-unit rental development in the near horizon if adequate government funding and financing supports are in place.

3.2 Market Profiles

Regardless of the achievement of other markers of success, the Planning Team recognized from the outset that the project would ultimately fail if it results in lots that nobody can (or wants to) buy. Keeping the end user in mind was critical. Based on responses to previous related public surveys, income and market demand data, and standard mortgage rates and rules, the Team initially developed a series of three hypothetical customer profiles to use as starting points in its analysis of market “fit” as follows:

	Customer 1	Customer 2	Customer 3
Annual Income	\$55,000	\$75,000	\$105,000
Down Payment	\$15,000	\$30,000	\$50,000
Lot Size	3000	5000	6500
Lot Price	\$60,000	\$90,000	\$120,000
Dwelling Size (ft ²)	700	1100	1750
# of Bedrooms	2	3	4
Building Cost (per ft ²)	\$240	\$225	\$220
Other Development Costs	\$26,000	\$30,000	\$35,000
Total Cost to Buyer (Mortgage Amount + Down Payment)	\$254,000	\$367,500	\$540,000

These customer profiles were intended to provide early reference points for useful discussion. Any development configurations or business/cost recovery models that propose lot prices beyond these were considered likely to fail, as the market simply wouldn't have the financial capacity to buy them. While these prices may still induce “sticker shock” and concerns about affordability, the Team believes they are within sufficient range of the current market (approximately \$80,000 for a regular 5000 ft² lot) that they can be expected to sell within the 3-5 year range, given population and demand projections.

4.0 Community & Stakeholder Engagement

4.1 Phase 2 Engagement – March/April

In order to inform the development of conceptual options, the Planning Team provided a number of input opportunities for Dawson residents, including:

Input Opportunity	Timeline	Participation
Online Survey	March 22-April 2	97 surveys
North End Resident Dessert & Walkabout Workshop	April 4	~20 ppl
Contractors & Developers Lunch Workshop	April 5	~20 ppl
Dawson City Dessert & Design Studio Workshop	April 5	~12 ppl

In addition to these efforts, the Planning Team sent a package introducing the project and Team members to Dawson residents north of Albert Street. A North End Facebook page was launched on March 23rd and garnered about 40 likes and almost as many interactions (reactions, shares, comments, etc.) from Dawson residents. The Team also received several emails from residents.

One-on-one meetings were also held with Tr’ondëk Hwëch’in, the Roman Catholic Diocese, and Klondike Development Organization to gather information and perspectives.



Figures 8-10. Scenes from March/April community engagement

4.1.1 Online Survey Results

Almost 100 Dawson residents participated in an initial online survey exploring two main topics: criteria for a successful North End development and demand for lots in the North End. The survey was administered via Survey Monkey for the purposes of quickly and broadly canvassing the community and results should not be considered statistically valid. Please refer to Appendix C for the complete results.

- **Neighbourhood of Residency**

Almost half (45%) of the respondents to the online survey lived within the Historic Townsite of Dawson City but not in the North End. About 1 in 5 respondents lived in the North End (considered north of Albert Street for purposes of survey). 32% lived elsewhere in the Dawson area.

- **“Success” Criteria**

The online survey explored the criteria against which Dawson City residents would evaluate the success of a North End residential development. Respondents were asked to indicate their level of agreement with a pre-determined set of criteria that had been developed with Mayor and Council (see Section 5.0). Survey respondents placed a priority on exercising caution with geohazards, range and mix of housing, land use efficiency, and servicing. The lowest ranked criteria were support from North End residents and property owners and housing as many people as possible.

- **Lot Demand**

Almost 40% of survey respondents indicated interest in buying a lot in the North End, while almost 48% responded “maybe”. Only 14% responded “no”.

When given the choice between small (50 x 60 foot), medium (50 x 100 foot), and large (50 x 130 foot) lots for maximum prices of \$60,000, \$90,000, and \$120,000 respectively, a majority of survey participants indicated a preference for a medium-sized lot, followed closely by a small lot.

4.1.2 Key Themes

The key themes that emerged from the survey comments, workshops, and social media interactions included:

North End & Dawson residents value the “wild”, natural character of the North End.

The vegetated, natural character of the North End – including its bird and amphibian life – emerged as a key value in the planning area. There was strong interest in retaining vegetation and greenspace and creating new amenities such as a park centering on the Paul Denhardt cabins and improved trail connections through the area.

Housing is a serious community need and affordability is important.

The Team heard that housing is an urgent need in Dawson. There were concerns that the Team’s proposed lot price thresholds were too high to be affordable for those who need it most. One workshop participant in his mid-to-late 20s stressed that lot availability is a deciding factor for long-term residency in the community for people his age. Affordability also relates to better outcomes; some contractors noted that high lot prices mean that owners lack the resources to prepare their lots properly.

What Dawson Residents Said: Survey #1 Comments

“Focus on families for a change. With apartments being developed, we are taking care of that demand. Think about the future and where we’re going to put families who want to set down roots.”

“I would like to keep the North End feeling like the North End. Yes, more people but lot of open space and not too dense....”

“When planning lots think about how people live. They may want a small house but they also want 2 cars, a shed, animals, etc. It’s not going to look like the “little house” pictures you see on the net....”

“Make all small lots. You don’t need a yard to grow grass especially in the proposed area. Keep it small and lots of ‘em.”

“Keep the prices attainable. The prices listed above are high, in my opinion.”

“Dawson’s housing shortage means that there is a shortage for all demographics and needs. My priority is high density, starter home lots for young people wanting to stay in Dawson. These people are young professionals and entrepreneurs who want to stay here long-term.”

“Retaining the semi-forested integrity of the North End is important for our town.”

“I do not want to see a whole lot of tiny crammed lots and houses...”

“Let’s get a good plan that survives.”

“I can’t think it would be affordable to develop serviced lots here. Who would pay for all of this?”

Detached dwellings are generally preferred and some density is acceptable.

Many workshop participants pictured a series of small to medium sized detached dwellings, with density being achieved through smaller lot sizes. There was some interest in exploring ways to accommodate very small dwellings and even higher density for the sake of affordability. There were not many mentions of larger multi-unit buildings to achieve density. Density was seen as necessary by some to offset the anticipated high costs of servicing.

North End development should be done differently.

There were concerns that new lots would look like “gravel piles” and detract from the area’s natural character. Concerns about altered drainage and off-site drainage impacts were raised numerous times. In requesting a “different” approach, ideas weren’t limited to site preparation either: one workshop participant suggested that a co-housing development be explored.

Residential development of the area should be serviced.

Consistent with the public survey results, bringing piped water and sewer to the North End was generally seen as an important “win” and rationale for further residential development by stakeholders.

Development in the North End will be challenging.

A range of challenges were raised by workshop participants, including encroachment and access issues for existing property owners, prevalence of permafrost in the area, naturally occurring asbestos, high costs of servicing, drainage patterns, and presence of artifacts, etc. A few participants urged the City and Planning Team to take their time and plan properly.



Figure 11. Neighbourhood design workshop results

4.2 Phase 3 Engagement – May/June

After the initial round of community engagement held between March 22 and April 5, 2018, the Team summarized the input they received in a first “What We Heard” report. Two concepts were developed and released for further input by the community and then Council itself via two opportunities:

Input Opportunity	Timeline	Participation
Online Survey	May 2-11	60 surveys
Team Presentation/Q&A Session with North End Residents	May 15	~20-25 ppl

In addition to these efforts, the Planning Team sent a letter to Dawson residents situated north of Albert Street. The Team also corresponded via email with several North End residents and met with two property owners in person. Social media posts and communications continued.

4.2.1 Online Survey Results

60 people participated in the second online survey. The survey was administered via Survey Monkey for the purposes of quickly and broadly canvassing the community and results should not be considered statistically valid. Please refer to Appendix C for the complete results. Highlights from the survey results are as follows:

• Neighbourhood of Residency

Almost half of respondents lived in the North End (considered north of Albert Street for purposes of survey). 31% lived elsewhere in the Historic Townsite, and 25% lived outside of the townsite altogether. The second survey's proportion of North End resident participants was double that of the initial survey.

• Preferred Concepts

Concept 2 received slightly more support than Concept 1, with 38% in support and 34% not in support. A majority of survey respondents supported Front Street sub-option B (mix of small/large lots) followed by sub-option A (all large lots). The least supported option was for four-plex lots. New lots on Judge Street were generally supported (58% vs. 30% opposing). The proposed micro-housing concept received mixed reviews - support (44%), opposition (31%), and quite a few neutral responses (25%).

4.2.2 Key Themes

The following is a summary of "what we heard" about both concepts from survey comments, correspondence with North End residents, and the May 15th Council meeting:

- *There are too many lots proposed in both concepts – level of density will destroy natural values & greenspace*
- *Cul-de-sacs are awkward (*others felt they would create a quiet, unique character)*
- *One-way streets won't work*
- *Historic street grid should be respected: don't close Edward Street!*
- *Concept 2 road is too wide and segments greenspace (*others felt it was a more elegant layout vs. cul-de-sacs)*
- *Current property owners should receive right-of-first refusal to purchase new adjacent lots*
- *Servicing may not be affordable or desired by some existing residents*
- *Historic structures should be respected and not moved where possible*
- *Lot prices are too high*
- *Other areas in Dawson may be more appropriate for development*
- *Small lots will result in off-street impacts and "sprawl" (*others felt small lots were crucial for affordability and starter homes)*
- *Some support and need for micro-housing*
- *Encroachments of current property owners should be addressed prior to planning new development*
- *Challenging ground conditions may result in ongoing maintenance to underground infrastructure*

What Dawson Residents Said: Survey #2 Comments

"NO MULTI FAMILY RESIDENCES! They belong in the downtown core. We need places for families."

"Large road is unreasonable size for the area. Does not conform with historical streetscape shape/form."

"The (Concept 2) road layout provides a more natural traffic flow and encourages movement through the community by foot/bicycle and doesn't feel as invasive when entering cul-de-sacs without being a resident there."

"By going through with this plan, you would inevitably destroy the layout and historical background of my neighbourhood."

"There are a few good things: the interneighbourhood green space, and the Denhardt cabin park, plus development of empty block (but not Edward Street closure), and some of the lots along Second Avenue, but everything else is very problematic and probably super expensive to do."

"Great!"

5.0 Success Criteria

Given the broad range of constraints identified for the North End area through the background studies, “trade-offs” between competing values and objectives and were expected. The development of “success” criteria for the North End conceptual design was proposed to assist the Team in its identification and ultimate recommendation of prospective solutions, assist Council in its decision-making role, and improve transparency and trust in the process.

The table below illustrates the set of success criteria and public and Council ranking, developed in three steps:

Success Criteria	Council Ranking	Public Ranking
Conforms with Heritage Management Plan	1	6
Retains the existing street grid	4	8
Comprehensive, long-term planning approach	2	n/a
Supported by North End residents/property owners	6	9
Protects heritage resources (not mandated to be protected by law)	6	n/a
Adopts a precautionary approach in regards to potential geohazards in the area	3	1
Resolves existing encroachment issues	3	n/a
Facilitates the provision of urban water and sewer services to new properties	3	3
Promotes efficient use of available land	3	2
Creates new neighbourhood amenities	6	7
Satisfies and/or is aligned with market needs and preferences	4	8
Supported by Dawson residents	6	5
Provides a range and mix of housing options (including affordable)	4	1
Minimizes risks of property damage or maintenance challenges for future owners	4	4
Supported by other governments (TH, YG)	5	n/a
Facilitates the provision of urban water and sewer services to existing properties	6	3
Supported by Dawson stakeholder groups	7	n/a
Creates opportunities for government and/or other partnerships	8	n/a
Achieves cost recovery	5	n/a
Houses as many people as possible	9	10

1. The criteria were initially developed by the Planning Team and subsequently refined, expanded and assigned a preliminary ranking by Council in mid-March.
2. Public input into the draft criteria was sought in late March/early April via the online survey. The public ranking results are indicated. (Please note that for sake of brevity, not all draft Council criteria were included in the survey).
3. Council reconvened to review the public results in mid-April and revised their ranking of several criteria.

Dawson residents placed a priority on exercising caution with geohazards, providing a range and mix of housing, land use efficiency, and servicing. Support from North End residents was the second lowest ranked criteria.

Council placed a markedly higher priority on conformance with the Heritage Management Plan and lower priority on range and mix of housing but also ranked precautionary approach and servicing and efficient use of land near the top.

Interestingly, both Council and the public ranked “houses as many people as possible” the lowest.

6.0 Preliminary Development Concepts

6.1 Phase 3 - Concepts #1 and #2

6.1.1 Overview

Subsequent to the initial round of stakeholder and public engagement in March/April, the Planning Team prepared Concepts #1 and #2 for Council and public review. The primary difference between the two concepts was road layout and the approach to resolving the Typhoid Cemetery area access and encroachment issues. The secondary design challenge related to the narrow width of the eastern end of Judge Street and need to drill and blast steep bedrock and/or relocate a large historic building that encroaches on the road right-of-way to achieve safe two-way travel. Both concepts assumed that this portion of Judge Street would remain its current width.

Both concepts also included a common set of sub-options specific to the 10-lot block B of City land located between Front Street and Second Avenue. These sub-options ranged from a small number of multi-residential building lots to twelve small (50 x 60/70 foot) lots to six large (50 x 130 foot) lots. Please refer to Appendix D for further explanation and comparison of the two initial design concepts.

6.1.2 Council Direction

After listening to the Team's presentation of the options and public and North End resident input, Council directed the Planning Team on May 15th to pursue Concept #2 further and work to resolve some of the key concerns with it in another round of design. It also directed the Team to pursue sub-option B for Front Street (six 50 x 60 (or 70) foot lots and three 50 x 130 foot lots), the option most supported by survey respondents. Council indicated a preference for closing Edward Street to create a new lot (subject to clarity around the public's understanding of continued pedestrian access) and avoiding drilling and blasting of steep bedrock to widen the roadway in the Third Avenue/Judge Street area.

6.2 Phase 4 - Concepts 2a, 2b & 2c

6.2.1 Design Challenges

The refinement of Concept #2 hinged around a key design element/challenge: the consolidation of private parcels in the Typhoid Cemetery area, closure of the steep corner/narrow width portion of Third Avenue, and need to provide access to four of the six private parcels affected from the north. The Team prepared three variations on Concept #2 for further input and consideration: Concepts 2a, 2b, and 2c.

With the widening of Judge Street ruled out as a viable option, all three concepts assumed that any new access road and the portion of Judge Street east of Second Avenue would be designated for one-way travel only. As such, they shared common features of quieter/narrower streets, a unique, non-grid like character and need for driver/resident adjustment.

The recommendation in the geotechnical study that new road construction avoid cut and fill techniques and instead utilize fill construction was the other major design constraint. The Team worked from the assumption of a maximum 8.5% design grade and 10-metre right-of-way width to conceptualize the extent of fill required to achieve the two steep alignments and understand the resulting impacts to Second Avenue and adjacent properties. Please refer to Appendix E for further explanation and comparison of the three final design concept options.

7.0 Final Development Concept

7.1 Concept Features

After weighing the advantages and disadvantages of Concepts 2a, 2b, and 2c, Council directed the Planning Team to pursue a final concept reflecting Concept 2b. Please refer to Appendix F for an illustration of the Team’s final concept.

7.1.1 Lot Yield, Sizes, and Layout

The proposed development concept yields a total of 28 new lots as follows:

- 10 small;
- 12 medium; and
- Six 6) large.

20 of the new lots can be accessed via Second Avenue, Third Avenue or Judge Street in their current configurations. The remaining eight require the construction of a new road that would branch off at a 90° angle from Second Avenue two lots north of George Street and connect up to the current alignment of Third Avenue just north of the Typhoid Cemetery. Edward Street would be closed to vehicle traffic and Third Avenue would terminate in a cul-de-sac just south of the cemetery.

The concept envisions the reconfiguration and consolidation of six privately owned lots (or lot portions) in the Typhoid Cemetery area to address encroachments as well as ensure legal access to each lot. A similar treatment is proposed for three other lots – two located on Judge Street and the other on Second Avenue – for the purposes of addressing encroachments and achieving minimum lot size for the R1 zone currently applicable to the planning area. Various other encroachments exist throughout the planning area but do not pose equivalent barriers to the creation of new lots in the North End; these should be addressed via the framework presented in Section 8.0.

7.1.2 Greenspace and Neighbourhood Amenities

In keeping with the wishes of North End residents, the North End development concept envisions both the retention of greenspace and minor, site-sensitive interventions to better facilitate public enjoyment of them.

An interior corridor of greenspace between 2nd and Third avenues is retained in the concept, and a formal City park created to encompass the Paul Denhardt Cabin Municipal Historic Site. The natural and historic character of the site is its defining feature and should be upheld; as such, the park is proposed as a site for quiet contemplation and learning. The park should receive minor infrastructure such as a picnic table, benches and interpretative signs to facilitate spontaneous use and visitation by Dawson residents and visitors. Yukon Historic Sites Branch should advise on recommended treatments to the buildings themselves. A short trail is proposed to facilitate access to the new park from a small pull-out on the new road.

Two other trails are proposed in place of the roadway sections proposed for decommissioning: Edward Street and the Typhoid Cemetery corner of Third Avenue. The trail surface should be approximately six feet wide to facilitate off-road vehicle passage but restrict motor vehicles. The trails should be properly graded for drainage

Lot Sizes & Market Demand

The Team classified lot sizes as follows:

Small: 2500 – 4499 ft²

Medium: 4500-6499 ft²

Large: 6500 ft² +

The distribution of lot sizes corresponds closely to the results of the first online survey, where 39% of respondents indicated a preference for a medium-sized lot, 32% preferred a small lot, and 27% preferred a large lot.

and surfaced with White Channel gravel or similar material. Bollards or other barriers could be installed to restrict motorized vehicles as necessary. Fencing and/or shrubbery would be installed to create privacy between these public trails and adjacent properties.

While not directly related to North End re-development, it is important to note that the private properties located in the northwest portion of the planning area (and owned by the Roman Catholic Diocese) also comprise valued greenspace in the North End. The Church would like to enhance the site, including more formalized parking at the upper terrace of Lot 31 and an upgraded walking trail from the parking area to the gravesite itself. The Church has put forward a nomination for the canonization of Father Judge to the Vatican; should this be successful, a more significant investment may be warranted at the site to accommodate the anticipated increase in visitation.

Housing Best Practices

The Team undertook a review of housing best practices in support of the project, the results of which are included in Appendix G. The proposed design concept reflects many aspects of the best practices the Team compiled into its "Top 10" list as follows:

- A range of lot sizes and pricing promotes a diversity of housing options for a diversity of residents;
- Narrower roads promote a pedestrian-friendly network and human-scale design;
- Multiple walkways allow for pedestrian permeability throughout the area;
- Affordable housing built form and policy innovation are encouraged; and
- Nearby park and greenspaces and walkable distances to employment and amenities help create a complete neighbourhood.

Lastly, it is important to note that the geotechnical evaluation recommends a shallow lined ditch (or French drain) through the interior greenspace and park area for the purposes of conveying drainage and potential debris flows; this recommendation should be revisited given the high importance North End residents place on undisturbed greenspace and the likely negative impacts to the site's aesthetics.

7.1.3 Affordable Housing Pilot Project

Lots 2 and 13 Block C of the North End were identified as being prone to higher rates of downslope movement due to their proximity to the toe of the slide. The Planning Team proposes that these two lots be consolidated and utilized for an affordable housing innovation project. The City of Dawson would retain ownership but lease the land to a third party to provide small non-permanent rental units – essentially "tiny homes" – with affordable monthly rents. Parking and servicing would need to be carefully considered and the proposed development would require either rezoning of the area or the creation of a new stand-alone zone (see Section 9.0). Challenges aside, such a project would see two marginal lots brought into productive use and help the City of Dawson and its housing partners provide a new, innovative rental housing option that could be piloted and transferred to other areas in the community.

7.2 Civil Design

7.2.1 Roadways

Concept #2 includes a proposed one-way roadway to serve as the main road access for eight (8) new lots and four (4) existing lots (including newly reconfigured lots in the Typhoid Cemetery area). The prevalence of permafrost in the area necessitates the construction of new roadways utilizing fill (versus cut and fill) techniques. The average grade between Second and Third avenues roughly along the alignment of the proposed new roadway is around 12%; the fill required to achieve a more conventional maximum design grade of 8-8.5% would extend across Second Avenue (into the City lot proposed for affordable housing) and Second Avenue and existing private property accesses would need to be re-graded accordingly. The Team estimates that the fill

required would raise the elevation of Second Avenue approximately three (3) metres at the new road intersection.

All other lots would be accessed off Second Avenue and Judge Street. The surveyed Government of Yukon lot upon which Edward Street is currently situated would be closed and converted into a 40 x 130 foot residential lot and adjacent public trail.



Figure 12. Looking north up Judge Street & Second Avenue (note narrow width approaching top of hill)

One-way operation, with the entrance off Second Avenue and exit along Judge Street, is proposed for the new roadway to ensure user safety in a narrow right-of-way. One-way streets operation is generally simpler and may result in fewer potential conflicting movements. Pedestrians would expect traffic only from one direction and the crossing distance is narrower. Vehicle conflict points at intersections are also reduced. For the anticipated volumes of traffic, unsignalized intersections should suffice and intersection controls can be limited to stop controls on minor approaches. Consideration could be given for a narrow two-way road design, possibly incorporating pull-outs at appropriate intervals with necessary sightlines.

The more detailed design of roadways for the North End area should be informed by their desired function, not vice versa. The proposed road's primary purpose would be to provide access to new properties – including emergency access – and not to facilitate efficient traffic movement. Based on the low density of the area the new roadway would service (i.e. 12 lots), the roadway will see traffic volumes typical for a Public Lane (less than 500 vehicles per day) or a typical Residential Street (less than 1,000 vehicles per day).

Follow-up study will be required to refine the roadway design and gain clarity around the following design criteria:

- 1) **Traffic Impact Study:** A Traffic Impact Study (TIS) should be undertaken to confirm traffic volumes for the proposed roadway. The TIS should be a simple exercise intended to define the traffic volumes that will be considered in the new roadway design and determine the accompanying Road Classification. It is anticipated that the roadway can be classified as a typical Public Lane, which generally has a lower roadway standard compared to a typical Residential Street.
- 2) **Confirmation of One-Way vs. Two-Way:** Since a single family lot typically produces around 10 vehicle daily trips, 120 or so vehicle trips per day can be anticipated – roughly equivalent to around 12 vehicles during the peak hour. As mentioned above, the TIS will likely conclude that a Public Lane road type will suffice from a functionality perspective. The study, combined with the roadway design standard and safety considerations, would further advise on whether the proposed one-way or modified narrow two-way road is most appropriate.

- 3) **Roadway Design Standard:** The road cross-section design will be dependent on the available right-of-way and the other ancillary function the road is intended to serve. At a minimum, the road should have a driving surface of six (6) metres to accommodate emergency vehicle access and deployment. No parking should be permitted on either side. A wider road cross-section would be required to accommodate parking or extra width for wider travel lanes (larger vehicles) if needed. Also, space for walkways, ditches, trees, and utilities would also need to be taken into account for total road right-of-way.
- 4) **Safety Considerations:** As mentioned previously, there are some significant grade differences to overcome between Second and Third avenues and grades as high as 10% may need to be considered. These types of grades are typically avoided when possible; however, the roadway may be designed to maintain appropriate vertical and horizontal sightlines and appropriate grades at intersections.
- 5) **Optimal Alignment:** The conceptual road alignment should be revisited in the interests of minimizing fill and associated impacts to Second Avenue and existing private property driveways. Ideally, the new intersection would be sited further north along Second Avenue to reduce the amount of fill required to achieve safe design grades; however, any gains made in this respect will need to be carefully weighed against the implications of encroaching further into the recommended geotechnical setback and identified debris flow pathway and drainage course. The alignment of the north-south section of the new roadway should also be carefully examined to achieve the desired lot yield and minimize the amount of road fill and fill required to achieve safe access to adjacent new lots.

Ultimately the City will need to be comfortable with the road standard that is applied to the site and should be closely engaged as part of preliminary design to ensure the appropriate considerations are being integrated into the roadway design.

7.2.3 Water and Sewer

The North End development concept envisions the extension of the current water and sewer servicing configuration – specifically dead-end watermains with bleeders - to minimize the capital costs to service the area. The proposed servicing scheme is organized into three separate nodes as follows:

- **Node 1** – 16 new and two (2) existing privately owned lots in the Front Street block and Second Avenue area (in the vicinity of Edward and George streets);
- **Node 2** – Three (3) new and 10 existing privately owned lots³ situated along the north end of Second Avenue and Judge Street;
- **Node 3** – Nine (9) new lots and five (5) existing privately owned lots between Second and Third avenues.

Detailed servicing diagrams illustrating the three nodes and accompanying servicing infrastructure needs is included in Appendix H. It is important to note that servicing any new or existing Front Street lots lacking access to Second Avenue would require the registration of an easement on title to allow the City to carry out any needed repairs. This requirement applies to three of the new proposed lots in the Front Street block as well as an undetermined number of the privately owned lots in Block C (between George and Judge streets).

³ The servicing concept assumes that fourteen currently surveyed and privately owned lots are consolidated, resulting in ten private lots.

As outlined in Section 2.3, the existing water and sewer systems appear to have sufficient capacity to meet the servicing needs of the proposed North End area; however, it is recommended that the design criteria of the new York Street lift station and new water treatment plant be reviewed to ensure the water distribution and sewer collection system are able to meet the needs of the proposed North End area.

From a capital cost perspective, extending the dead-ends to service the North End area is the preferred option; however, it is unclear if it makes sense from a life cycle cost perspective due to the potential reduced energy costs of proceeding with looped servicing. At a minimum, it is recommended that any dead-end servicing to the North End area take into consideration future watermain looping. It is further recommended that a separate study be undertaken to identify whether or not there are energy costs savings that justify proceeding with looped watermain servicing (please see Section 11.2).

From a capacity perspective, the water distribution system is designed for fire flow scenarios. Given the size of the North End area that will be serviced, it is unlikely that the additional water demand from this area will compromise the ability of the existing water system to meet the fire flow needs of the community. That said, it is recommended that the pumping capacity of the new water treatment plant be reviewed as part of subsequent design to confirm the water distribution will be met.

7.3 Cost Recovery

7.3.1 Projected Costs and Revenues

The Team undertook a Class C level cost estimate for implementing the final North End development concept by each node, presented in Appendix I. Using these cost estimates, a high-level cost recovery summary was developed (see table below).

	High-Level Cost Recovery Summary		
	Node 1	Nodes 1&2	Nodes 1-3
New Lot Sales	16	19	28
Existing Lots Serviced	2	12	17
Costs			
Costs to Date	\$300,000	\$300,000	\$300,000
Further Planning	\$50,000	\$50,000	\$50,000
Engineering & Legal Survey	\$90,000	\$151,000	\$290,000
Civil Works	\$749,400	\$1,256,800	\$2,409,500
Third Party Utilities	\$25,000	\$50,000	\$150,000
Contingency (30%)	\$225,000	\$378,000	\$723,000
Total	\$1,439,400	\$2,185,800	\$3,922,500
Revenues			
Lot Sales	\$1,240,000	\$1,510,000	\$2,360,000
Local Improvement Charges	\$60,000	\$360,000	\$510,000
Funding Required	\$139,400	\$315,800	\$1,052,500
Total	\$1,439,400	\$2,185,800	\$3,922,500
Sales & Charges Recovery Ratio	90%	86%	73%
Subsidy Per New Service Connection	\$7,744	\$10,187	\$23,389

The anticipated costs are \$1.4 million for developing Node 1, \$2.2 million for developing Nodes 1 & 2, and \$3.9 million for developing Nodes 1-3. Projected revenues through lot sales and local improvement charges are \$1.3 million for Node 1, \$1.9 million for Nodes 1 & 2, and \$2.9 million for Nodes 1-3.

Both Node 1 and Nodes 1 & 2 require relatively small funding amounts, for which a case can be made to infrastructure upgrade programs, as this is a hybrid infill development (see Section 11.1.3). The funding of just \$8,000-\$10,000 per new service connection would soon be recovered from the new property tax and utility fees accruing annually, estimated to be \$4,000 per new home and \$1,200 for an existing home. Of course, the case for Nodes 1 & 2 is predicated on the assumption that owners will agree to pay a Local Improvement Charge. Developing Nodes 1-3 will require about 200% more public funding than Nodes 1&2 while delivering only 33% more service connections/lots.

7.3.2 Lot Pricing

The implementation and financing model and whether or not the City of Dawson or Government of Yukon would be the final lot sales vendor has not yet been determined. As such, it is unclear which sales and valuation policies would apply. Government of Yukon policy typically prices lots using a blend of market value and development cost to achieve cost recovery without disrupting the private marketplace. City of Dawson sold its new country residential lots on Hillside Crescent similarly in 2014.

If the development extends beyond Node 1, it is clear that the economic capacity of the community is not sufficient to achieve even close to cost recovery. City of Dawson and Government of Yukon will need to balance their public policy goals of maximizing cost recovery in fairness to existing tax and ratepayers and enabling pricing at which residents can afford to finance purchase and home building. Lot pricing is beyond the scope of this study. This task should first be informed through the engagement of a qualified professional to undertake an independent appraisal, as was done by City of Dawson for the Hillside Crescent development. The Team heard repeated concerns that its hypothetical lot prices were too high for the local market; both the City and Government of Yukon can bear this in mind.

7.4 Other Recommendations

While not integral to the fulfillment of the North End development concept, the Team recommends the City of Dawson pursue the following measures for North End neighbourhood:

1. Relocate the encroaching portion of Front Street from the Lots 3, 4, and 31 owned by the Roman Catholic Diocese and complete the land transfer for the associated road right-of-way; and,
2. Work with Yukon Historic Sites to create an interpretive trail showcasing some of the tent platforms in the Typhoid Cemetery area and link the trail to the 9th Avenue Trail.

Cost Recovery Model Notes

1. Lot price estimates of \$120,000, \$90,000 and \$60,000 were applied as per market profiles;
2. Assumes a local improvement charge of \$30,000 per existing lot serviced;
3. Civil works includes road building, water and sewer installations, storm drainage and allowance for heritage, geohazard and geotechnical work required;
4. Third party utilities are power, telephone and cable (not validated within scope);
5. Further planning includes recommended property owner negotiations;
6. Phase II ESA, environmental investigations and remediation are excluded from project costs as these are liabilities to be addressed regardless and not directly attributable to land development; and,
7. A 'New Service Connection' includes both new lots and the existing lots gaining service.

8.0 Framework for Addressing Encroachments

One of the biggest challenges to the development and/or redevelopment of the North End are property encroachments. The challenge relates to the considerable number of them, the historic nature of many, and the need to understand their complexity not only in relation to one another but in the context of Dawson City as a whole. There is no perfect solution to this challenge. However, the Planning Team feels that there is a workable solution – one predicated on the consideration and resolution of encroachments within an overarching framework.

8.1 Guiding Principles

The Team’s framework sets out to address encroachments within the planning area issues in a manner that:

- Is fair, transparent, and consistent;
- Avoids setting a problematic precedent for the City;
- Upholds and/or reinstates City, territorial, and/or national legislation;
- Upholds and/or reinstates conformity with the Official Community Plan and/or Zoning Bylaw;
- Upholds and/or reinstates legitimate and lawful occupation and use of private and/or public lands;
- Protects historic buildings where possible, giving priority to those original to the site;
- Ensures proper legal access for all lots;
- Considers whether an inconvenience or hardship to property owners is self-imposed; and
- Facilitates orderly development, parcel and/or road configurations generally consistent with development patterns in the Historic Townsite.

In some cases, not all Guiding Principles will be simultaneously achievable and trade-offs will be required. The City should endeavour to meet as many principles as possible in its application of the framework.

8.2 Recommended Approaches

The Planning Team has delineated nine general types of encroachments in the planning area, all of which relate either to roadways and laneways and/or surveyed lots. The framework recommends a standard approach and provides direction where exceptions may be required (and can be currently anticipated). The responsible party is effectively the party financially and/or otherwise responsible for addressing the encroachment.

It should be noted that not all encroachments are created equal, at least from a project implementation standpoint. The City of Dawson should assign highest priority to resolving encroachments that pose a direct constraint to development (i.e. the land in question is proposed for new housing and/or related access). A moderate to low priority would be assigned to those encroachments posing little to no development constraint (i.e. land in question already developed or generally unsuitable for new housing and/or related access purposes).

Ideally, the resolution of encroachments in the planning area would be coordinated between the City of Dawson and individual property owners to achieve an economy of scale and efficiencies where surveying is concerned. For example, lot enlargements (the responsibility of private owners) should be timed to proceed alongside the survey that will be required in preparation for the sale of new lots and associated access.

#	Description of Encroachment	Recommended Approach	Potential Exception	Responsible Party	Priority
Encroachments Involving Roadways and Laneways					
1	Traveled roadway encroaching on private property	Relocate roadway off property and in surveyed right-of-way	City to purchase land and/or negotiate land swap	City	High
2	Dwelling (historic and non) encroaching on right-of-way for traveled roadway	Encroachment agreement	Permit purchase at market value if remainder of road right-of-way proposed for new residential lot(s)	Property owner and City	Medium
3	Dwelling (historic and non) encroaching on surveyed but inactive road right-of-way and/or laneway	Permit land purchase at market value subject to lot consolidation where lot is non-conforming	None anticipated	Property owner	Medium
4	Accessory structure (historic and non) encroaching on active road-right-of-ways and laneways	Relocate buildings off right-of-way	None anticipated	Owner of dwelling(s)	Medium
5	Accessory structure (historic and non) encroaching on surveyed but inactive road-right-of-ways and laneways	Relocate buildings off right-of-way	Incorporation of laneway into lot extension; subject to lot consolidation where lot is non-conforming	Property owner	Low
Encroachments Involving Surveyed Lots					
6	Dwelling substantively situated on private parcel with encroachment on City-owned land	Permit land purchase at market value	None anticipated	Property owner	High
7	Dwelling situated entirely on City parcel without formal authorization	Remove dwelling	Permit land purchase for occupied residential dwelling subject to it meeting applicable codes and servicing	Property owner	High
8	Dwelling on privately owned lot extending on an adjacent lot under the same ownership, non-conforming to Zoning Bylaw	Consolidate lots; allow for non-standard lot configurations	None	Property owner	Low
9	Dwelling on privately owned lot encroaching on an adjacent lot under different private ownership	To be negotiated between property owners	City to consider assistance where City lands could help resolve situation	Property owners; City as needed	Low

9.0 Framework for Addressing Current Property Owner Impacts & Opportunities

The success of North End development will be judged both on the basis of how well it meets the needs of prospective residents but also the degree to which current residents accept it. New residential lots will create indirect impacts to property owners, many of which the Team has made best efforts to address in the final design. Development may also create direct impacts for individual property owners that the City must anticipate and address proactively. Equally so, the City must be prepared to respond to property owners' expressed interests in specific opportunities they see as a logical extension of new development in the North End.

9.1 Guiding Principles

Direct impacts to property owners, as well as potential opportunities, should be addressed in a manner that:

- Protects the overall intent of North End development to provide housing and home ownership opportunities with a priority on those whose household housing needs are not sufficiently met;
- Mitigate and/or compensate for any direct negative impacts on individual properties from development;
- Treat all property owners being similarly impacted in a consistent manner;
- Encourages owners of private lots most implicated in (and critical to) the successful redevelopment of the North End to cooperate; and,
- Encourages existing property owners to service their lots (as applicable).

9.2 Recommended Approaches

#	Description of Impact/ Opportunity	Recommended Approach	Responsible Party
a	Loss of current legal access and/or parking for lot(s) due to development layout	Enlarge lots to reinstate access and/or retain parking use; consolidate lots. City contribution subject to lot servicing.	City
b	Property access affected by reconfigured and/or re-graded roadways	Undertake work needed to ensure safe access to all lots	City
c	Creation of new residential lot(s) directly adjacent to private properties	Make available for purchase by adjacent owners if lot is not purchased through the initial lottery on condition of residential development; highest bidder if two adjacent owners. Subject to original property being serviced.	City/Property owner
d	Enlargement of lot to incorporate historic but inactive laneway	Allow land purchase at market value, subject to original lot being in conformance with Zoning Bylaw and lot servicing	Property owner
e	Financial hardship from introduction of servicing and/or need to purchase land to resolve encroachment issue	<ul style="list-style-type: none"> • 15-year repayment period • Allow lot consolidation (i.e. one service per lot) <i>Alternative:</i> <ul style="list-style-type: none"> • Deferral of payment 	City/Property owner

9.2.1 Site-Specific Approaches

• Typhoid Cemetery Area

The final design concept creates both impacts and opportunities for the three property owners in the Typhoid Cemetery area. These impacts/opportunities and proposed approaches are summarized below.

Owner	Encroachments	Impact	Opportunity
#1	Owner can purchase land to resolve encroachments on currently owned portions of Lot 3/4	Loss of access – City to compensate with its portion of Lot 4 (not including the encroached upon portion); privacy screening from new roadway may be negotiated Need to relocate building on Lot 5 – see Opportunity	Owner has right of first refusal to purchase laneway between Lots 3/4 and 7/8 to enlarge property
#2	Owner can purchase laneway and a portion of Lots 1&2 to address encroachments and achieve required side lot setback	Loss of access & parking – City to compensate with a portion of Fourth Ave right-of-way and privacy screening (fence, landscaping, etc.) from new trail	Not applicable
#3	Not applicable	Loss of access & parking – City to compensate with a portion of Fourth Ave right-of-way and privacy screening (fence, landscaping, etc.) from new trail	Not applicable

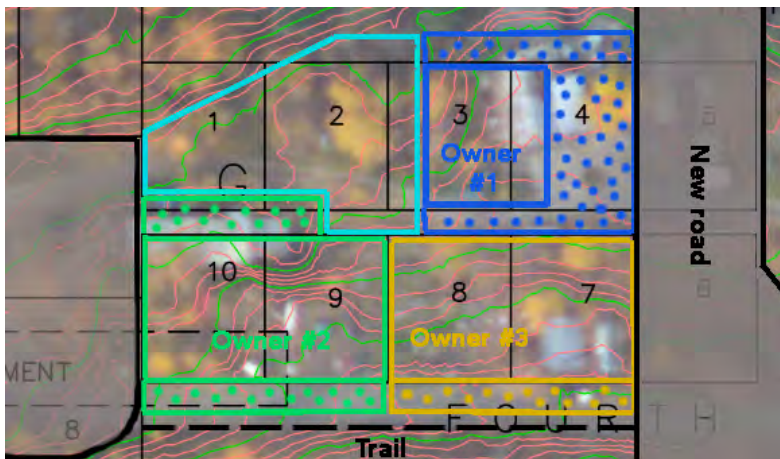


Figure 13. Typhoid Cemetery area lot enlargements (dotted areas) and new lot (turquoise border)

• Second Avenue

Two lots facing Second Avenue pose a particular planning and zoning challenge. The southerly one-half of Lot 2 Block G is privately owned and occupied by the DeWolfe cabin (YHSI listed), which appears to partially encroach on City's Lot 1 Block G to the south. Another residence (not historic) is located on Lot 1 without formal authorization and has been occupied on a rental basis for a number of years.

The proposed arrangement hinges on the property owners consolidating and servicing the lots in question. Front yard setbacks would still not be achieved for Owner #2 and Owner #3 and this would need to be resolved either via policy (see Section 10) or subdivision of the road right-of-way. The latter approach may pose a particular challenge in the instance of Owner #3 due to the need for adequate turning radius in the proposed new cul-de-sac on Third Avenue.

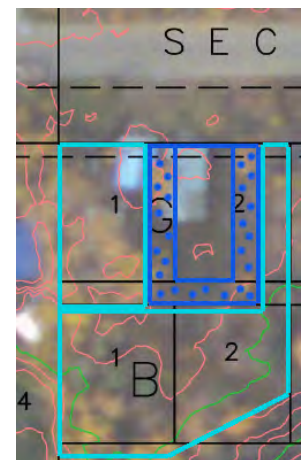


Figure 14. Second Avenue lot enlargement (dotted area) and two new lots (turquoise border)

The Team recommends allowing the enlargement of the privately owned portion of Lot 2 to the south, north, and east – all at the owner’s expense. This will bring the lot into conformity with the R1 zone minimum lot size of 2500 ft² and restore required side-lot setbacks. A proper front-yard setback for the historic cabin would still not be achieved, however, and is best addressed via policy (see Section 10). The enlargement to the north should be restricted to approximately 10-12 feet to leave approximately 13-15 feet for a driveway access for the new parcel occupying Block B Lots 1&2. Any enlargement would be contingent on the new lot being serviced.

Lot 1 Block G would be enlarged into the historic laneway, creating a new (approximately) 40x70 foot lot. The current owner/landlord for the building could be given the opportunity to purchase the lot subject to the City receiving proof of the building meeting applicable health and safety codes, building relocation to conform with the Zoning Bylaw, and agreement to service the lot. Should those conditions not be met, the building should be relocated at its owner’s expense.

- **Judge Street**

Three privately owned lots are of interest here. Lots 6 & 7 Block D are occupied by a residence that encroaches into the surveyed Second Avenue right-of-way. Lot 6 Block E to the east is accessed from the same right-of-way. A YHSI registered shop is located on the southeast corner of the property and encroaches into the Judge Street right-of-way.

The development concept proposes the creation of a new (approximately) 50 x 100 foot lot in the Second Avenue right-of-way. Lots 6 & 7 Block G should be consolidated and enlarged sufficiently to address the encroachment and leave a sufficient side-yard setback (contingent on servicing). The shop on Lot 6 Block E should be addressed through an encroachment agreement. The City will need to restore access to Lot 6 Block E in cooperation with the property owner.

9.2.2 Establishing Market Pricing

City of Dawson Sales of Municipal Lands Policy #14-04 provides direction from Council to establish the terms and conditions for the disposition of City-owned lands. This planning exercise, as well as any future ones, will satisfy the requirements of the policy to allow for the release. However, the policy provides no specific guidance with regard to valuation. The price of the small portions of land to be sold to existing property owners should be determined as follows:

- **Closed laneway purchases** – Extend the above stated guiding principle of treating all impacted owners in a consistent manner and consider other recent similar sales in the community. For example, a laneway sale agreed to in 2015 in the south end of the Historic Townsite valued the land as low as \$4.55/ft². Increasing this to reflect the market since that time suggests a laneway purchase value estimate of approximately \$6/ft².
- **Encroachment purchases** – Apply the loss of land sales revenue (cost recovery) that accrues to the City as a consequence of resolving the matter. The estimated average price used in the cost recovery projection implies a purchase value estimate of \$18/ft² in these circumstances.

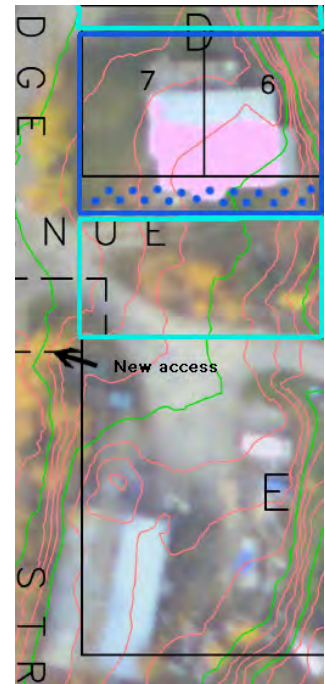


Figure 15. Judge Street lot enlargement (dotted area), new lot in right-of-way, and relocated property access

9.2.3 Contribution of Current Property Owners to Services

The *Assessment and Taxation Act* defines a 'Local Improvement' to include the street and storm drainage improvements and new water and sewer services envisaged in the development concept. The *Municipal Act* enables the City of Dawson to authorize such an undertaking as a local improvement, and to specify:

- The benefitting properties;
- The total cost of the local improvement;
- The portion to be levied against the benefitting properties; and
- The specific cost to be levied against each benefitting property as a local improvement tax.

There is no record of the City of Dawson previously authorizing such a tax, although it was anticipated during the previous North End property owner negotiations of the 1990s, and the draft agreements. While City of Whitehorse has a bylaw (2011-21) that establishes procedures and rules for application of these taxes that could serve as a model, in the absence of local precedent the City has considerable leeway to determine how to apply a charge in this circumstance. Of course, care should also be taken in that the methodology of application here may also set such a long-term precedent.

Importantly, the *Municipal Act* allows for benefitting property owners to object to the tax, and if the majority do so, the tax cannot be levied (although the City may still proceed with the improvement at its own cost). In the case of North End development, this places considerable influence into the hands of a very small number of owners. The City will need to ensure that owners positively perceive the service upgrade value received relative to the amount to be charged. While the amount must be rationalized and fair to City tax and ratepayers outside the benefitting area, a process of gentle negotiation with the beneficiaries is recommended to establish the appropriate charge. The charges included in the cost recovery model of this report are estimates of this balance only, as such a negotiation is beyond the Team's scope.

Local improvement taxes (paid along with annual property taxes) are typically amortized over a 15-year period to ease the burden upon owners. Under such an arrangement, a \$30,000 levy is reduced to \$2,000 per year plus any interest charges. The approach could also consider following the example of the Government of Yukon Rural Electrification Policy that provides for a deferment of up to 15 years. This would allow benefitting owners to enjoy the full remaining life cycle of previously installed septic systems before incurring the costs due for the new piped services.

The selection of the best approach will be informed by the final development financing and implementation business model. Only the municipality, as the taxing authority, can levy the improvement tax. However, Government of Yukon may finance and/or build the development. If so, suitable arrangements will need to be in place to ensure collection and remittance of these revenues in a mutually acceptable manner.

10.0 Zoning

Current zoning applicable to privately owned and/or potentially developable land parcels in the North End is predominantly R1 – Single Detached/Duplex Residential. The portion of Block C occupied by the Whitehouse Cabins and the bridgehead reserve parcels are zoned C1 - Core Commercial. The Typhoid Cemetery is zoned P2 - Institutional and the former site of St. Mary’s Hospital, now owned by the Roman Catholic Diocese, is zoned P1 – Parks and Natural Space.



Figure 16 (above). Zoning map for the North End Area
 Figure 17 (below). R1 – Single Detached/Duplex Residential Requirements from City of Dawson Zoning Bylaw

COLUMN 1	COLUMN 2
.1 Minimum parcel size	232.3 m ² (2,500 ft. ²)
.2 Minimum parcel width	7.6 m (25 ft.)
.3 Minimum setback of buildings from:	
• front parcel line	3.0 m (10 ft.)
• interior side parcel line	
➤ for a dwelling	1.5m (5 ft.)
➤ for a non-dwelling accessory building	0.6 m (2 ft.)
• exterior side parcel line	3.0 m (10 ft.)
• rear parcel line	1.5 m (5 ft.)
.4 Maximum parcel coverage	50%
.5 Minimum floor area of dwelling unit	23.8 m ² (256 ft. ²)
.6 Maximum height for:	
• Principal Building	10.7 m (35 ft.)
• Accessory Building	6.1 m (20 ft.)

The Team reviewed the R1 zone requirements in the City of Dawson Zoning Bylaw (2012) to determine their suitability with respect to the proposed North End development concept. The Team concluded that the R1 zone is largely compatible with continued, orderly development of the North End. The envisioned lots will meet the minimum parcel size and width requirements, and the maximum parcel coverage of 50% should provide a sufficient building footprint on even the smallest lots.

The R1 zone could pose undesirable limitations in a few specific instances, however. The requirement to conform with the Zoning Bylaw to consolidate and/or enlarge existing privately owned lots will be difficult to achieve for an anticipated two (2) properties with historic buildings with little to no front yard setback. Side yard setbacks could also pose challenges to development of a small lot with terrain constraints. The Zoning Bylaw could be amended to provide flexibility for these specific situations. If this approach is undesirable, a new zone may need to be created.

The R1 zone requirements are unlikely to successfully facilitate the affordable micro-housing pilot project as well. Instead of creating an exception within the R1 zoning requirements, the Team recommends the creation of a new Housing Innovation (or similarly named) zone that relaxes limits on the number of dwellings, setbacks, and minimum floor areas subject to the achievement of public policy aims and fulfilment of health and safety requirements.

The P2, C1, and P1 zoning currently in place in the North End planning area is appropriate and should continue to apply. Lot 4 Block F (the Paul Denhardt cabins) and the contiguous lots intended to remain as greenspace could be rezoned P1.

11.0 Implementation

11.1 Implementation Approaches

11.1.1 Leveraging Other Major Infrastructure Works

The City of Dawson and Government of Yukon are currently working in partnership to deliver a multi-year program of water and sewer upgrades in the community. Subject to final funding and project approvals, it is expected that the civil works projects for 2019, on both Fifth Avenue and Third Avenue (between Albert and King Streets) will be soon be tendered. The latter project is located in very close proximity to the North End.

If the use of general contractors from outside Dawson is anticipated rather than the community-based model discussed below, leveraging these other works to achieve savings in mobilization/demobilization costs and cost efficiencies of scale should be considered. If necessary for tender timing while the final design is completed, anticipated change orders could be included in the work scopes to enable this.

11.1.2 A Community-Based Model

The cost projections included in Section 7.0 are based on the market prices recently established through public tenders of other municipal civil works underway nearby. All of these contracts were awarded to general contractors from outside of Dawson and the majority of the economic benefits and profits will leave the community. By comparison, a 17-lot development adjacent to the North End planning area was completed in 2014-15 by a private developer using local contractors at much lower unit costs, enabling lower lot prices and a profit margin.

One need not look far for a successful alternative. In response to community concerns about economic benefits of large infrastructure projects being realized by outside contractors, the Village of Teslin, Government of Yukon and the Teslin Tlingit Council have worked together for several years to implement a community-based delivery model instead. A project manager is hired and the work contracts broken down to sizes manageable by the local contractors. This approach spreads benefits across the community and particularly towards smaller First Nation businesses, in so doing upholding Final Agreement Chapter 22 commitments and the spirit of reconciliation. Road upgrades, storm drainage, lift stations and other infrastructure developments similar to what is envisioned for the North End have all been successfully completed in this manner and considerable local capacity has been built along the way.

For this model to be successful, a Construction Manager would be required that is proficient in directing and tracking construction activities. The Construction Manager would be hired by the Owner (City/Yukon Government) and would in turn hire local contractors through Government of Yukon's Third Party Equipment Rental and track construction progress and costs and advise the Owner as construction progresses. In this model, the City and/or Government of Yukon would take on the responsibility of General Contractor and the local contractors would be hired as Sub-Contractors.

An example of the successful implementation of this model where a Construction Manager directed local contractors to complete work through Government of Yukon's Third Party Rental was the Mayo River Flood Control project. Following the completion of this project, it was awarded the 2017 Yukon Engineering Excellence Award.

The City of Dawson and Government of Yukon should explore the potential for this model to be applied to the North End project and reduce costs, improve recovery, and result in reduced lot prices to the public.

11.1.3 Funding

Government of Yukon policy directs that land development for sale to the private market in Yukon be undertaken on a cost recovery basis, and infrastructure funding has generally not been applied to developments. However, there have been examples (such as Carmacks) where new lots have been developed in conjunction with funded infrastructure projects such that lots could be offered at prices that reflect community economic capacity rather than their 'true' development cost.

This approach is not a pure land development, but rather a hybrid of infill development and infrastructure upgrades that will also serve many existing residences, businesses and public amenities. In regards to the North End, a case could be made that improving storm drainage, extending full services for environmental sustainability, and upgrading sub-standard roads and mitigating geohazards for public safety are in keeping with the goals and objectives of current federal infrastructure funds administered by Government of Yukon. These works would also qualify for gas tax funds allocated to Dawson.

The full looped servicing to eliminate bleeding is a major system performance enhancement that is not required to service the new lots and is certainly eligible for funding. The cost-benefit case for this should be made independently, considered for separate funding and not be integrated into the cost recovery model for North End development.

However, the funding question that must be answered is one of prioritization. The City has a long program of required future upgrades to its existing infrastructure in water, sewer, solid waste and recreation services and will need to determine how this project fits within these other requests, for a limited pool of money.

11.1.4 Partnerships

The final development concept includes a 50 x 130 foot lot that would be retained by City of Dawson and leased to a partner to construct and operate micro-housing rentals. This would avoid any potential liability of selling the lot, should the site prove unstable over time for a larger building. The micro buildings could be more easily adjusted or even moved off site should this occur and this use is in keeping with current commercial use of this block.

Klondike Development Organization representatives have expressed early interest in such a partnership, as such buildings may be more affordable to construct per rental unit delivered than apartment buildings. While such a lease would not generate immediate cost recovery revenues, it would add to the project goals of delivering on community housing needs and broadening the socio-economic profile of the beneficiaries. An early public Request for Expressions of Interest should be issued in the next planning phases to offer and confirm partnership interest in this.

11.2 Follow-up Investigations

11.2.1 Background Report Recommendations

A number of recommendations were made in the background reports commissioned by Government of Yukon in preparation for North End planning. If and/or when the project advances, these recommendations should be revisited. Please refer to the table below.

Background Report	Recommendations for Further Study – Pre-Design
Geotechnical Evaluation Proposed North End Subdivision (Chilkoot Geological Engineers Ltd., 2016)	<ul style="list-style-type: none"> • Documentation of existing structure conditions in area prior to construction • Detailed topographical survey • Detailed geotechnical investigation • Natural hazards assessment • Seismic evaluation
Geotechnical Evaluation - Geohazard Assessment Moosehide Slide Area (Chilkoot Geological Engineers Ltd., 2017)	<ul style="list-style-type: none"> • Annual monitoring of Moosehide Slide • Modeling of unstable blocks
Heritage Heritage Resource Impact Assessment: City of Dawson North End Planning Study (Ecofor, 2018)	None recommended unless development or peripheral infrastructure is located upslope of planning area
Phase I Environmental Site Assessment City of Dawson North End Study Area (Associated Environmental, 2017)	Phase II ESA of identified Areas of Potential Environmental Concern and including: <ul style="list-style-type: none"> • Groundwater monitoring of existing wells on site • Quantitative investigation into presence of asbestos in areas proposed for development

11.2.2 Other Studies

As outlined in Section 2.3, the Team recommends that the City review potential energy cost savings that could justify providing looped servicing to the North End area. The potential energy cost savings in question are as follows:

- Reduced Heating Costs at Water Treatment Plant – The well water enters the water treatment plant at around 2°C, while the recirculated water returns to the water treatment plant at around 5°C. Having a looped water distribution system reduces the amount of water that is discharged into the sewer system through bleeders at the dead-end, which in turn decreases the heating requirements at the water treatment plant (recirculated water enters the water treatment plant around 3°C warmer than well water). Part of this review needs to consider bleeder flow requirements for frost protection in the sewermain and whether or not bleeder flow are required in addition to the residential bleeder flows that are employed in the winter for freeze protection at each water/sewer service.
- Reduced Wastewater Treatment Plant Energy Costs – Reducing the bleeder flows decreases the wastewater flows that will enter the wastewater treatment plant. Lower flows will ultimately reduce energy costs at the wastewater treatment plant.

The intent of this exercise would be to inform decision-making around the long-term operation and maintenance of Dawson City’s water infrastructure to help create a more sustainable community.

11.3 Development Plan

Moving the North End concept from idea to reality will require coordination and cooperation moving forward. The Planning Team has outlined a sequence of logical next steps for the City of Dawson and Government of Yukon to consider. These steps, or tasks, can be categorized under four broad categories:

- Work required irrespective of development;
- Preliminary design;
- Detailed design; and,
- Construction/implementation.

The following sections provide more detail on each of these areas and links to a final implementation table. Please note that the timelines in the table represent a 'best case' scenario geared towards bringing lots to market as quickly as possible.

11.3.1 Work Required Irrespective of Development

The background studies and planning work undertaken to date have highlighted several issues in the North End area that are not directly attributable to future development but could be addressed simultaneously. These include:

- **Environmental investigations and remediation** – The Phase I Environmental Site Assessment (ESA) recommended that a Phase II ESA to better understand possible sources of environmental contamination in the area. The Areas of Potential Environmental Concern (APECs) should be considered environmental liabilities by the City of Dawson and action taken regardless of the development decision.
- **Encroachments** – Regardless of whether or not development proceeds in the North End, the issue of encroachments in the North End requires resolution in the interests of good governance. Should development proceed, property owners will need to be dealt and negotiated with on an individual basis, the goal being to incorporate any lot changes and encroachment agreements (for properties both implicated in development and not) into the larger survey and administrative tasks for the new development and maximize the number of serviced lots. In the event that development does not proceed, or proceeds for only a portion of the planning area, the City of Dawson should still work with property owners to bring their lots and land use into conformance in a manner that balances property owner needs with the preservation of future development options.
- **Front Street relocation** – Front Street currently encroaches on numerous parcels owned by the Roman Catholic Diocese and the road needs to be relocated, irrespective of North End development.

11.3.2 Preliminary and Detailed Design

Following the selection of the preferred development concept, the preliminary design of the proposed subdivision should be initiated. The intent of a preliminary design exercise is to advance the concept to a point in which all of the design criteria has been refined and the scope of the work is identified. For this project, items that should be undertaken as part of the preliminary design include the following:

- **Traffic Impact Study (TIS) and roadway design** - As outlined in 7.2.1, the TIS will identify the Road Classification based on anticipated traffic volumes which will feed into the roadway design standards that

will be used to ensure safe traffic movement in the area as well as achieve appropriate emergency vehicle access to the area.

- **Stormwater management plan** - There are some existing drainage paths through the site and the purpose of a stormwater management plan is to define the storm events and drainage path that will need to be maintained in the site design. This includes culvert sizing, ditches and any stormwater retention ponds necessary to mitigate drainage issues to the area.
- **Grading design** - Following the completion of the TIS and stormwater management plan, a grading plan will be completed which will take into consideration the road design requirements, drainage requirements as well as the access requirements to each of the existing and proposed lots.
- **Servicing design** - Following the completion of the grading design, a servicing layout for water and sewer will be undertaken. The layout will outline the proposed alignment of the new water and sewer infrastructure (watermain, fire hydrants, bleeder manholes, sewermain, manholes) as well as the locations of the proposed services to each lot. The servicing design will also consider the power and other utilities that are required for the proposed development.
- **Geotechnical investigation** - A geotechnical investigation is required to inform the design for the buried infrastructure and roadway. There is an existing geotechnical investigation; however, additional tasks have been identified to further define some of the site geotechnical/geohazard constraints. In addition, the debris flow path/drainage course between Second and Third avenues requires further examination in the context of both road location and the retention of natural greenspace. The preliminary design may proceed prior to the completion of these additional geotechnical investigations; however, these tasks should be scheduled to ensure the geotechnical engineer has sufficient information to provide design recommendations as part of the detailed design phase.
- **Refined lot layout** - The outcome of the grading design and servicing design will inform whether or not any changes are required to the lot layout and the lot layout can be finalized.

At the completion of the preliminary design, the design of the proposed subdivision will be at a 30% to 50% design stage. The roadway and servicing design as well as the lot layout will be advanced to the point where there will be no substantial changes to the scope of the work. At this stage the project, all parties should be in agreement with the scope of the work.

The detailed design stage essentially involves taking the scope of the work defined in the preliminary design stage to a point where a contractor can construct it. This involves developing design drawings and technical specification that provide the necessary information and details for a contractor to order materials and plan and construct the work. Once the detailed design package (drawings and specifications) is complete, the Owner can procure the services of a contractor to complete the work. While preliminary and detailed design are underway, the City of Dawson and Government of Yukon can work behind the scenes to make sure that the supporting administrative processes are in place for property owner servicing payments, new lot sales, etc.

11.3.3 Implementation/Construction

A new legal survey of the subdivision, including new road right-of-ways, lot enlargements, lot consolidations, and easements, would be the first task completed prior to actual construction. After construction is complete, the land lottery would be the final task.

Task	Timing	Work Required Irrespective of Development	Preliminary Design/ Detailed Design	Construction/ Implementation	Project Milestone
1	Summer/Fall 2018	Phase II ESA			
2	TBD	Environmental remediation (if required)			
3	Summer 2018	Make decision as to project viability			YG/City to determine subdivision viability and extent (i.e. Nodes 1-3)
3	Fall/Winter 2018/19	Resolve encroachments; negotiate with property owners			
4	Fall/Winter 2018/19		OPTIONAL TASK: Review feasibility of including water, sewer, road improvements within existing contracts		YG/City understand options to advance infrastructure works
5	Fall-Winter 2018/19		Complete preliminary design and detailed design for subdivision		
7	Fall-Winter 2018/19		OPTIONAL TASK: Request cost via a contemplated change order to existing public works contract		YG and City gain certainty around costs to inform decision-making. No commitment is made yet.
8	Spring-Fall 2019		Prepare administrative and financing mechanisms for lot sales, servicing payments, etc.		
9	Spring 2019			Legal survey of subdivision and construction tendering	Contract is awarded
10	Spring 2019			Pre-construction heritage resource recovery (as needed)	
11	Spring-Fall 2019	Relocate Front Street off encroachment		Construction, including extension of utilities and roadway improvements and associated monitoring (heritage, etc.)	
12	Winter/Spring 2019-20			Lots released for sale	



City of Dawson

Report to Council

Agenda Item	Sister City MOU Proposal with Zabreh na Morave
Prepared By	David Henderson CAO / Councillor Patrik Pikalek
Meeting Date	Sept 13, 2023
References (Bylaws, Policy, Leg.)	
Attachments	

	Council Decision
x	Council Direction
	Council Information
	Closed Meeting

Recommendation

That Council endorse the attached MOU establishing a sister city relationship with the Czech Republic Town of Zabreh na Morave and the agreement be signed by the Mayor.

Executive Summary

The City of Dawson has a historical place in the Czech Republic with the widely read stories of Robert Service and the Call of the Wild. Renowned Czech adventurer, Jan 'Eskimo' Welzl, was born in Zabreh na Morave, and had chosen Dawson City as his home from the year 1929 until 1948. Mr. Welzl's rich adventures and significant contributions to the history and heritage of Dawson City are well celebrated in Zabreh na Morave and have served as a strong link between the two cities, establishing cultural and interpersonal connections.

In turn, the Czech ex patriot community in Dawson is of significant size. A Sister City relationship would be beneficial for the City with the mutual promotion of cultural, educational, and economic co-operation.

With authorization of Council, Councillor Pikalek, with the assistance of administration has reached out to the municipal leadership of the city of Zabreh na Morave with the purpose of exploring the interest and feasibility of establishing a sister city relationship, aimed at promoting intercultural understanding, educational exchanges, and economic co-operation.

Councillor Pikalek has conducted preliminary discussions regarding the attached draft MOU establishing the sister City Relationship which is being reviewed in Zabreh na Morave currently.

A sister City relationship is whatever the two cities want to make of it – in its simplest form it may be the exchange of information and connecting school programs - or it could mean encouraging travel of residents and organizations between communities.

Background

Sister Cities international is a formal side of the Sister Cities idea, formed in 1956 to create global relationships based on cultural, information and trade exchanges. The result, as per their website, is the development of lifelong friendships that provide prosperity and peace through person-to-person "Citizen diplomacy".

Sister Cities International encourages membership and a minimal annual dues payment. Participation in Sister Cities International is an option but is not required to develop a Sister City relationship – a formal relationship is essentially an MOU between the two communities stating that each side will promote interaction with the other where possible to do so and from that point onward is largely driven by local champions be they ex patriots, teachers, artists, business people or local organizations who reach out and promote a connection, an exchange of ideas, student exchanges, cultural exchanges, etc

Discussion / Analysis

If the MOU is adopted by both parties then the relationship is established and it will be up to interested parties to develop the relationship over time.

Fiscal Impact

No direct fiscal impact is anticipated at this time with no commitment of funds by either municipality under the memorandum of Understanding. The potential for economic impact to develop over time exists with increasing contact between members of each community

Alternatives Considered

Not applicable

Next Steps

If the Mou is approved at committee it will be forwarded to council for final approval and both parties will be asked to sign off – ideally a zoom signing celebration may be arranged or a ceremony coinciding with a potential visit by a Czech Republic embassy representative.

Approved by	Name	Position	Date
	<i>David Henderson</i>	CAO	June 26, 2023

Draft MOU – Sister Cities

Draft MOU

Mayor -----

Draft Sister Cities Memorandum of Understanding (MOU)

Between

The City of Dawson, Yukon Territories, Canada

and

The Town of Zabreh na Morave, Czech Republic

Preamble

WHEREAS Jan 'Eskimo' Welzl, a renowned Czech adventurer, was born in Zabreh na Morave, and had chosen Dawson City as his home from the year 1929 until 1948, and;

WHEREAS Mr. Welzl's rich adventures and significant contributions to the history and heritage of Dawson City are well celebrated in Zabreh na Morave and have served as a strong link between the two cities, establishing cultural and interpersonal connections, and;

WHEREAS, the two cities are desirous of promoting cultural exchanges, enhancing mutual understanding, and establishing closer relations between their people, and;

WHEREAS the town of Zabreh na Morave and the City of Dawson acknowledge their shared history, reflected in the life and legacy of Mr. Jan 'Eskimo' Welzl, providing a foundation for a Sister City relationship.

Article I: Sister City Relationship

The City of Dawson and the Town of Zabreh na Morave, recognizing their shared historical ties and mutual respect, hereby establish a Sister City relationship to strengthen friendly relations, mutual understanding, and cultural cooperation.

Article II: Activities of Cooperation

The two cities will encourage exchanges and cooperation in the fields of culture, education, tourism, and local development. This will include potential partnerships between local museums, student exchanges, and promotional activities in each respective city.

Each city will strive to involve their local communities in the Sister City relationship and will encourage communication and engagement among their citizens.

Each city will inform the other city of any major developments, changes, or initiatives which could influence the Sister City relationship.

Article III: Implementation

This Memorandum of Understanding will be implemented at no cost to the cities. Any potential costs for promotional materials or other activities will be evaluated and approved separately by each city.

The cities will establish a Sister City committee comprising representatives from each city, responsible for the coordination and implementation of this agreement.

Article IV: Term and Termination

This Memorandum of Understanding will remain in effect until terminated by either city. Either city may terminate this Memorandum of Understanding with a written notice delivered to the other city six months prior to the desired termination date.

This Memorandum of Understanding is signed this day, [Date], in the City of Dawson, Yukon Territories, Canada, and in Zabreh na Morave, Czech Republic.

Dawson City Mayor,

Zabreh na Morave Mayor



City of Dawson Report to Council

Agenda Item	Meeting Dates and Schedule Recommendations
Prepared By	David Henderson CAO
Meeting Date	Sept 13, 2023
References (Bylaws, Policy, Leg.)	Council Proceedings Bylaw
Attachments	

<input checked="" type="checkbox"/>	Council Decision
<input type="checkbox"/>	Council Direction
<input type="checkbox"/>	Council Information
<input type="checkbox"/>	Closed Meeting

Recommendation

That Council change, by resolution, the meeting day for council and committee of the whole meetings from Wednesday to Tuesday.

And that Council Change, by resolution, the meeting schedule for Council committee meetings and committee of the whole meetings, effective October 2023 or immediately following the passing of such resolution by council, to the following:

- Committee of the Whole meetings will be scheduled for the first Tuesday of the Month excepting the months of July, August, and January.
- Council Meeting will be scheduled for the 3rd Tuesday of the month.

Executive Summary

Currently Council and Committee of the Whole meetings are scheduled for Wednesday's. Wednesday meetings pose a challenge to when it comes to the preparation of staff reports for council. Moving the meeting day to Tuesday enables the maintenance of a Friday distribution and weekend review of agenda packages while adding an additional business day to staff for preparation of reports for the next meeting.

It also packages last minute updates or changes into the first two days of the week, versus 3, inhibiting the likelihood of last-minute changes and enabling staff to turn their focus to the next meeting and other business by Wednesday Morning.

Currently the schedule for Council meetings and Committee of the Whole meetings does not follow a set monthly pattern or a set pattern in relationship to adjacent meetings. By moving to a set monthly pattern (ie the 1st and 3rd Tuesday) stakeholders can easily discern when a meeting should be scheduled and what form of meeting it should be. By setting the pattern with a two-week gap between meetings we are better able to ensure the development and editing of staff reports as needed for meetings. By identifying a pattern relationship between Committee of the Whole meetings and Council meetings we can then work on better differentiating the work in the two meetings such that council and administration is more effective.

As the meeting schedule is set by council resolution it is reasonable that the day and schedule can be adjusted by resolution.

Background

Council sets the meeting schedule annually by resolution. Municipal Councils generally set meeting schedules on a monthly pattern that can be easily communicated to all stakeholders – elected members, staff, the public, proponents of various issues, and the media.

Dawson has adopted a Committee of the Whole system whereby most issues go to the Committee before proceeding to Council for final determination.

When an issue is moved from Committee of the Whole to Council it will often entail an updated report from staff considering the discussion at committee, adding additional information, etc. Doing so takes time and focus. When a report is drafted it is the queued up for review by the CAO and often by the CFO and may then require edits.

Previous and current administrations have identified timelines for submission of reports indicating one week prior to the distribution should be required to adequately move a report through the process and onto an agenda for Friday distribution. While this is happening staff must deal with the day-to-day operational needs of the municipality.

Discussion / Analysis

Administrations have repeatedly identify the need for reports to be submitted with sufficient time for reviewing, editing, approving while at the same time dealing with day to day operations.

With back-to-back meetings the morning after a meeting is already well past the identified submission deadlines and often past a realistic deadline to prepare an agenda package for distribution prior to the end of the Friday workday.

With Meetings scheduled 2 weeks apart but on Wednesdays a requirement for report submission by staff one week prior to a Friday distribution requires reports to be submitted by the Monday of the week of Agenda Package distribution. This means 2 business days following the previous meeting on the Wed is available to staff to prepare an updated report, at the same time as dealing with day-to-day business. Moving the meeting day to Tuesday adds 1 full business day to this process while maintaining the goal of delivering an agenda package on Friday.

The inclusion of both steps in this recommendation recognizes that these steps collectively will move us to better usage of staff time and more effective preparation for meetings incrementally while maintaining the goal of a Friday agenda package distribution. Ideally this results in better information in councils' hands when making decisions.

Referring to these steps as "incrementally "improving our efficiency and effectiveness is purposeful as it will not solve all problems overnight and will not prevent weekend or Monday morning adjustments based on unique situations, but they will considerably improve our system.

This type of scheduling is the common practice amongst municipalities.

Fiscal Impact

As this is a scheduling recommendation it is not anticipated that it will have a direct fiscal impact.

It will have an indirect fiscal impact if it can reduce the amount of time spent outside the normal working hours by managers and staff in preparation of agenda packages and reports which cause a strain on staff and must be managed.

Alternatives Considered

1. Change the schedule to first and 3rd Wednesdays and not change the day from wed to Tuesday. Unfortunately, does not go as far as we are able to go to make the system better and we will still face the occasional back-to-back meeting with a virtually impossible timeline.
2. Change the Day to Tuesday but maintain the current schedule. Unfortunately, does not gain the significant advantage of patterned schedule with a 2-week gap between meetings.
3. Maintain the current schedule and days until January and change for 2024. This is a viable option, but the challenges of the current system are facing us now.
4. Maintain the current schedule and days – This is a viable option, but the downside is as described above.

Next Steps

If approved at committee this recommendation will go to council for final approval and implementation

Approved by	Name	Position	Date
	<i>David Henderson</i>	CAO	Sept 10, 2023