

Implementation Strategies and Financing Report



Northlands Infrastructure Replacement Steering Committee
June, 2008



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1.0 Introduction

1.1. General

Yellowknife Condominium Corporation #8 (Northlands Condo Corp) is a residential mobile home development located in the fringe of the downtown area in the city of Yellowknife, within 1.2 kilometers of the downtown core. The development is occupied by an estimated 775 to 1,100 people occupying 258 mobile homes. The mobile home development was originally developed in the early 1970's and was transitioned into a condominium corporation in 1990. The sewer and water infrastructure that was installed in the 1970's has reached the end of its useful life and needs to be replaced.

Northlands Condo Corp, through its Infrastructure Committee, is working with the City of Yellowknife (City) to resolve the infrastructure issues that currently exist within the Condo Corp. A "working group" to the Infrastructure Committee is advising the committee on all technical matters pertaining to this project. The working group consists of one member from the Condominium Board, one member of the Condominium Corporation owners, and members from the City of Yellowknife, including the Director of Public Works and Engineering, the Manager of Planning and Lands, as well as a member of City Council.

The City of Yellowknife issued a Request for Proposals and Terms of Reference (TOR) to undertake a feasibility study. In December of 2007, the City retained Dillon Consulting to undertake the feasibility study. The working group is the Steering Committee responsible for the administration of the feasibility study.

The goals and objectives of the overall project as stated in the terms of reference are as follows:

- To develop and implement a sustainable infrastructure system within Northlands to provide satisfactory service levels to the residents of Northlands Condo Corp;
- To develop and implement an infrastructure system that meets the City of Yellowknife's servicing standards;
- To implement the project in a manner so as to optimize the access to available funding for the capital works to mitigate the financial impact to the Northlands Condo Corp.

The feasibility study will chart a path the Corporation could follow to reach these goals

The feasibility study has 3 major components.

1. Technology Design Development
2. Planning Review
3. Implementation Strategies and Financing

Reports were prepared for each component of the study. An Executive Summary Report was also produced. This report focuses on implementation and financing and provides:

- Project scheduling information
- A review of construction delivery options
- A review of potential Financial Methods
- Cash flow projections
- A recommended strategy

The report outlines the primary areas that need to be addressed in the development of the implementation strategy for the project. Ultimately Northlands Condo Corporations will be responsible for deciding what path they take. This report is provided to assist the Corporation in this effort.

1.2. Risk Management

An implementation strategy for the Northlands Infrastructure project will be similar to many major municipal capital projects and will involve scheduling and financing choices. But the strategy also needs to consider risk management: the longer it takes to replace the infrastructure, the greater the risk of failures and costly repairs.

To help manage the risk it is recommended that a construction sequence replace the older parts of the system first, leaving the more recent sections of the existing system in service for up to 5 years after the project commences. The sooner the project can start the greater the chance this approach will succeed.

2.0 Project Scheduling

The Technology and Design Report provided an overview of scheduling considerations for the construction work needed to replace the water and sewer infrastructure. The Planning Report provided information about development constraints and redevelopment potential that could be considered in conjunction with the infrastructure replacement.

Once the scope of the project is clearly defined, design work will need to be done, and a construction contract will need to be established. Once construction is complete other work to be done as part of the project will include warranty, operation and maintenance training, and possibly a transfer of land ownership. An overview of project scheduling options and brief descriptions of 3 major stages of a capital project follow in Sections 2.1 to 2.4. A much more detailed schedule will need to be developed as the project is more clearly defined and decisions are made about financing and construction approaches. The services of an experienced project manager are highly recommended, and will likely be a requirement of financing.

2.1. Schedule Options

A typical approach to scheduling this type of project would be to complete the design for the entire project before proceeding with bidding and construction.

Comprehensive Approach

Stage	2008	2009	2010	2011	2012	2013	2014
Predesign							
Design							
Bidding							
Construction			phase 1	phase 2	phase 3	phase 4	
Commissioning				phase 1	phase 2	phase 3	phase 4
Warranty				phase 1	phase 2	phase 3	phase 4

Since construction will take place over several years, it would also be possible to schedule design and construction in phases. This could better allow for modifications from year to year, and might be a good approach if land development changes are being considered.

Incremental Approach

Stage	2008	2009	2010	2011	2012	2013	2014
Predesign							
Design		phase 1	phase 2	phase 3	phase 4		
Bidding		phase 1	phase 2	phase 3	phase 4		
Construction		phase 1	phase 2	phase 3	phase 4		
Commissioning			phase 1	phase 2	phase 3	phase 4	
Warranty				phase 1	phase 2	phase 3	phase 4

2.2. Pre-Construction Stage

Before construction can commence the new infrastructure will need to be designed by a professional engineering firm. Design time could range from several months to a year for a project of this size. This will include time for design documents to be reviewed at two or three stages by Northlands Condo Corp and their advisors.

Time will also need to be allowed for engaging professional design services. This could be done directly using a Request for Proposals for design services, or indirectly using a design-build approach. In either case it will take several months to put together a description of the project to allow competitive proposals to be prepared. Proponents then require a month or more to prepare their proposals. Time will also be needed to evaluate proposals and award a contract.

If the construction work is to go to public tender once the design is complete, a bidding period of at least one month to six weeks will need to be allowed.

2.3. Construction Stage

The capacity of the local construction industry to complete underground work in Yellowknife has historically been \$3 to \$4 million per year. The City of Yellowknife has been undertaking approximately that level of infrastructure renewal over the past two decades on an annual basis. The City also intends to complete that level of infrastructure renewal on an on going basis over the next decade. Therefore the proposed works in Northlands will need to be completed in concert with the City's infrastructure renewal programs.

A conservative strategy would be to plan to undertake the construction works in quanta that the local construction industry can manage successfully. A four (4) year construction phasing is suggested.

2.4. Post Construction Stage

Post construction tasks will include warranty, operation and maintenance training, and possibly a transfer of ownership. Some activities may commence prior to completion of construction, such as land transfers or training. Time is also usually required to correct deficiencies once the work is substantially complete. This stage of the project will take at least one year, and possibly more.

3.0 Delivery Methods

The intent of the utility upgrades was to proceed with a standard design bid, or design build process. However several municipalities have used the development of a separate utility company and implement the work under a design/build/own/operate approach. A very brief description of each process follows. There are many opinions on the risks and benefits of each approach in terms of cost, schedule and management responsibilities. Further advice may be needed when the time comes to select an approach.

3.1. Design Bid Process

This is the approach typically used for an infrastructure replacement project in Yellowknife. Northlands Condo Corp would engage a designer who would be responsible for developing a design and preparing tender documents. Tender documents describe in detail what needs to be built. Bids are then requested through public tender. A contract is then awarded on the basis of lowest cost. The design consultant and the successful contractor are both responsible to the owner (Northlands Condo Corp) under separate contracts. The design consultant usually inspects the work of the contractor and reports on progress to the owner.

3.2. Design Build Process

The design build process combines the responsibility for design and construction into one contract. Northlands Condo Corp would issue a Request for Proposal that describes the basic project requirements. Typically a contractor will prepare a proposal together with a qualified design firm. The contract is not awarded on the basis of the lowest cost. Proposals are evaluated against criteria including qualifications, schedule, past performance and cost. The successful proponent would then proceed with design work.

This approach is often used for the construction of standard buildings where the design requirements are well known and fairly easy to repeat. It is however an approach that is used for other project types. It could simplify contract administration for Northlands Condo Corp as there is only one main contract for the work. The contractor reports on progress to the owner. There are often cost savings for repeat designs, but this would not necessarily be true for the Northlands infrastructure project.

3.3. Utility Company Partnership

A description of this approach follows in section 4.2.3. Essentially a utility company would take on all responsibility for managing the project, including design, construction and financing. This approach could require a substantial amount of time up front to set up an agreement and negotiate rates. The responsibilities of Northlands Condo Corp would then be very reduced, but total project costs would be expected to be relatively high.

4.0 Finances

In the broadest terms, the proposed undertaking will have a capital value of approximately \$9 to \$20 million. The technology report developed capital cost estimates for the options to implement the rehabilitation works. The summary of these options and costs are presented below. For more information on these options, the reader is directed to the technology report.

Table 4.1 Comparative Capital Costs

Option	Estimated Cost 2008	Estimated Capital Cost 2011
City Standard	\$13,265,000	\$18,459,000
Modified City Standard	\$13,777,000	\$19,171,000
Hybrid Underground and Utilidor Piped System	\$9,044,000	\$12,585,000
Hybrid Trucked System	\$10,045,000	\$13,978,000

Finding a means to attract the level of investment to allow the project to proceed will be a major step. This section of the report provides a description of the financing issues, a discussion of the financial vehicles that may be available, and an assessment of the options potential for success.

4.1. Financing Costs

It is highly unlikely that the Corporation will be able to generate the required capital at the start of the implementation to complete the works. Because Northlands Condo Corp does not currently have adequate capital funds in reserve, some level of financing will be required. The cost of financing a large capital project is significant. The interest costs, as well as the inflationary costs have a significant impact on the total investment required to complete the works, but also impacts the Corporation's ability to attract financing vehicles.

There are many variables associated with the time value of capital. Variables that are completely out of the control of the Corporation will impact the ultimate cost of the implementation. These variables include interest rates, inflation of materials and supplies, and risk assessments completed by the lending institutes. Some variables the Corporation can control, such as the length of time that they intend to discharge their debt, or the amount that the corporation can pay.

Table 4.1-1 and Table 4.1-2 show what the monthly costs over the length of the investment could be given a 5% interest rate and various amortization periods, and the associated initial capital investment needed per unit.

Table 4.1-1

amortization (in years)	Capital Investment (\$000) at 5% interest					
	\$10,000	\$12,000	\$14,000	\$16,000	\$18,000	\$20,000
5	746	895	1,044	1,194	1,343	1,492
10	418	502	586	669	753	837
15	311	373	436	498	560	622
20	259	311	363	415	467	518
25	229	275	321	367	413	458

Table 4.1-2

total investment	\$10,000	\$12,000	\$14,000	\$16,000	\$18,000	\$20,000
investment per unit	\$38,760	\$46,512	\$54,264	\$62,016	\$69,767	\$77,519

It should be noted that the above monthly costs are for the investment in water and sewer infrastructure only. The units will still be responsible for the payment of water services, taxes, and condo fees, as well as any necessary renovations to their units to allow service connections.

4.2. Financing Options

Some indication of unit owner financing preferences was gathered through surveys distributed at consultation sessions organized in conjunction with the feasibility study. Based on the information gathered to date, the optimum approach to financing may be a flexible one that will allow for different repayment options suited to different preferences: while some owners would prefer to make a large down payment, for others low monthly payments would be preferable.

There are a number of methods available to the Corporation for the financing of the Corporation's investment. These options can be divided into three main groups. A description of each follows:

4.2.1. Financial Institutions

A loan to the Corporation is perhaps the easiest financing method to understand. Essentially the Corporation would take out a loan with a bank or other lending institute for the required capital funds. Elements of the loan will entail:

- ✓ Establishment of some collateral to allow the Corporation to receive the monies
- ✓ Repayment of the loan principal and interest over the payment period

Other demands that maybe placed by lending institutes may include:

- Insurance
- Mortgage liens
- Annual financial reporting
- Financial auditing of the corporations assets.

*Northlands Infrastructure Replacement Steering Committee
Implementation Strategies and Financing Report*

Each condominium unit would then be responsible to the Corporation for an equal share of the repayment in accordance with the terms of the loan. Northlands Condo Corp would be responsible for enforcing the obligations of the unit owners. Non payment or default of the loan would likely result in foreclosure and the lending institute placing the corporation into receivership. The lending institute would likely retain the power to sell off the properties to regain its investment.

Built up equity in the form of real estate will be a factor for long term financing. The current assessed value of all Northlands lots totals over \$14 million. This reflects 100% of market values in Yellowknife for the 2005 base year. Financial institutions would probably also look more favorably at the Corporation if it began building up the capital reserve fund prior to seeking financial assistance.

An alternative to the Corporation taking the lead on the financing with a lending institution would be for the individual unit owners to finance their share of the cost. In this option, each and every unit holder would need to obtain individual financing from a lending institute. The collective funding would then be placed in a capital reserve and used to fund the infrastructure project. This option would allow individual units to choose how to finance their portion of the infrastructure project cost:

- The terms of payment could vary to suit individual situations and preferences in terms of down-payment, amortization, and interest rates.
- Access to grants or low interest loans could be available on an individual basis that would not be available to the corporation.
- There is a precedent as Trails End Trailer Park Condo Corporation used this type of approach in the mid 1990s.

For many individual unit owners, the total investment they will have made in their unit in Northlands after the infrastructure upgrade will still compare favorably to other ownership options available in the city of Yellowknife.

4.2.2. Partnership with the City

If the City agreed to do the work using the *Municipal Capital Fund*, it would be similar to the previous option. The City would want to ensure the same security as any other financial institution. Because both the By-Laws of the Northland Condo Corporation and the By-Laws of the City would need to reflect the arrangement, this approach could take some time to put in place. If there was support for this approach, the City would not divest the capital to Northland Condo Corporation, but would complete the capital works through its annual capital program.

The City's requirements would need to be established for the repayment. Non payment would likely result a similar action to that of the above option with the units being sold off similar to the foreclosure system the City has for non payment of taxes. Implementing this option could be very complex.

The use of a *Local Improvement Tax* would be a variation on this option that would also have the City financing the infrastructure replacement, with unit owners paying off the cost through their taxes. This approach could be somewhat flexible, allowing owners to set the term of the repayment and the City has some previous experience with this approach.

4.2.3. Partnership with a Utility Company

There are a number of companies that operate municipal utilities as their core business. Some common names include Terrasen, Corix, Epcor, Ripley, and Northwestern Utilities Limited. These companies typically undertake the ownership, operation, and maintenance of a municipal service on a fee for service basis. This approach is more commonly known in the solid waste management industry with operations like BFI and Laidlaw or with electric and gas utilities like Northlands Utilities, Sempra Gas, and Superior Propane. It's the same concept with underground utilities, and in some cases, it's the same companies.

The basic concept is that the utility company enters into a long term arrangement (often over 30 years) to provide the required service. In compensation for providing the service, the customer is required to enter into a servicing agreement, often a monopoly arrangement. Payment for the service is normally an upfront cost, followed by a unit cost. For household utilities, the cost is normally paid directly by the home owner. For example, the power costs that are incurred in Northlands are paid by the unit owner to the power company. It's the same type of agreement for a water and sewer utility.

Dillon contacted a utility company that we work with across Canada to discuss the Northland's situation. Some comments from them are as follows:

- The project would be considered as a high risk project. Risks include the current state of the infrastructure, lack of clarity on long term viability, and the fact that perceived costs may be seen as very high by residents.
- The project has no potential for expansion, and this is an important aspect that the companies look for in their investments.
- There are better opportunities currently available to the utility companies in other regions of Canada. This type of operation is truly a global market. There are a limited number of companies that are providing private utility operation, and a growing number of potential clients for them.

Overall, it is believed that unless there is the ability to provide an external guarantor for the project, the Northlands opportunity would not be well received by the private sector utility companies.

4.3. Project Funding Assistance

One of Northlands Condo Corp's goals is to access funding to mitigate the cost to unit owners. The original intent of the feasibility study was to identify capital funding assistance that the Corporation could apply for. However, during the course of the study other possibilities were also raised and added to the options as discussed below:

4.3.1. Sale of common property

During consultations with unit owners, the sale of common property was identified as a potential revenue source for the project. The storage compound and Unit 259 (which does not have a dwelling unit on it) were identified as potential properties that could be sold by the corporation.

A redevelopment plan could result in changes to the development potential of the land, which could in turn increase the value of the property.

4.3.2. Individual assistance to low income owners

Assistance to individuals with demonstrated need may be available through CMHC or NWT Housing Corporation programs. In particular support will be available for upgrading work that helps to maintain or increase affordable housing options. CMHC considers affordable housing to be housing that costs less than 30% of the household income. For this reason assistance will be more easily available on an individual basis.

4.3.3. Capital Grants

Because Northlands Condo Corp does not currently have adequate capital funds in reserve, one of the goals of the project is to access external funding through a capital grant program to mitigate the cost to unit owners. Working in partnership the City and Northlands Condo Corp were successful in obtaining financial assistance from the Federation of Canadian Municipality's (FCM) Green Municipal Fund (GMF) to undertake this feasibility study. The intent was then to use the study to support further requests for capital funding assistance through the GMF project funding program.

In January, 2008 however, new guidelines for GMF programs were announced that created a conflict between two of the project goals:

- funding assistance from the GMF is now targeted at innovative projects using new technology with broad application to other municipalities
- the City's standards are based on 'tried and true' technologies

If Northlands Condo Corp chooses to pursue an innovative technical solution to increase their chance of receiving capital funding assistance through GMF, they will reduce their chances of having the City of Yellowknife take over long term responsibility for water and sewer services.

External funding would certainly be a benefit to the project. The ability of the Corporation to attract external funding would also make the project more acceptable to other investors – whether they be the unit owners, the City or a Financial Institution. The tables below demonstrate how a 20% subsidy or grant could affect the monthly unit payment options or overall unit investment.

Table 4.3-1

With 20% Subsidy Estimated Monthly Payments per Unit

amortization (in years)	Capital Investment (\$000) at 5% interest					
	\$10,000	\$12,000	\$14,000	\$16,000	\$18,000	\$20,000
5	597	716	836	955	1,074	1,194
10	335	402	468	535	602	669
15	249	299	349	398	448	498
20	207	249	290	332	373	415
25	183	220	257	293	330	367

Table 4.3-2 Initial capital investment per unit with 20% subsidy

Project Cost	\$10,000	\$12,000	\$14,000	\$16,000	\$18,000	\$20,000
Investment per unit	\$31,008	\$37,209	\$43,411	\$49,612	\$55,814	\$62,016

This report is not intended to predetermine the outcome of any funding application process and caution is advised considering:

- the chances of receiving external grants could be limited
- the time it will take to apply for and receive funds
- reliance on external funding could put the project at greater risk if confirmation of grants delayed the start of the project

The investigation and pursuit of capital grants is being completed as a separate initiative to the Feasibility Study being undertaken by Dillon.

4.4. Cash Flow

Knowing the estimated cost of construction, and the possible phasing, it is possible to project how much funding will be required for each year of the project. Table 4.4-1 below provides an example of what the cash flow requirements could be for the project. The amounts shown indicate the relative magnitude of costs based on a total construction cost of \$20 million.

Table 4.4-1

EXAMPLE: Cash Flow Projections 2008 (\$000)

Stage	2008	2009	2010	2011	2012	2013	2014	2015	Total (\$000)
Predesign	60								\$60
Design	211	845	211	211	211	211	211	21	\$2,133
Bidding			5	3	3	3	3		\$17
Construction			3,520	3,520	3,520	3,520	3,520		\$17,600
Commissioning							100		\$100
Warranty								10	\$10
Allowance for other fees (Legal, survey, accounting, project management)	10	10	10	10	10	10	10	10	\$80
Totals	281	855	3,746	3,744	3,744	3,744	3,844	41	\$20,000
<i>Cumulative</i>	<i>281</i>	<i>1,136</i>	<i>4,882</i>	<i>8,626</i>	<i>12,371</i>	<i>16,115</i>	<i>19,959</i>	<i>20,000</i>	

5.0 Strategy Recommendations

This report has provided information in three important categories: Schedule, Project Delivery, and Financing. A number of options are presented that will require a series of decisions to be made or actions to be taken by Northlands Condo Corp. These include:

- Determining a preferred financing option
- Deciding how to reduce total capital investment by Condo Corp owners
- Determining the preferred long term responsibility for infrastructure
- Determining the preferred long term development option
- Determining the preferred technical design concept.
- Adopting a project schedule
- Establishing a communications strategy
- Formulating a Recommendation to the members of the Condominium

Some of the decisions to be made or actions to be taken are internal decisions that can be made by the Board of Northlands Condo Corp, while others will be more dependent on external factors or cooperation with others. Some of the decisions or actions should be taken care of quickly, while others are less urgent. All decisions will require the Board to assess the risks and chances of success. The strategy shown in **Error! Reference source not found.** below will take Northlands Condo Corp to the point where they have a clear understanding of the project parameters, and are ready to proceed with a Special Resolution in accordance with the Condominium Bylaws.

Table 4.4-1

Prio rity	Action or Decision	Primary Responsibility	Timing	Resources
1	Determine preferred financing option	Financial Institutions	Immediate	Person or committee
2	Decide how to reduce total capital investment by Condo Corp owners	Internal	Immediate	Person or committee Legal advice
3	Determine preferred long term responsibility for infrastructure	cooperation with City	As soon as possible after Steps 1 and 2	Legal advice Person or committee
4	Formulate a Recommendation	Internal	Following steps 1, 2, 3	Legal advice
5	Establish a communications strategy	Internal	Once information is available from steps 1 and 2.	Person or committee Graphic design assistance
6	Determine preferred long term development options	cooperation with City	Should be done in conjunction with 7.	Professional advice could be required
7	Determine the preferred technical design concept.	Internal	Should be done in conjunction with 6.	Professional services could be required
8	Adopt a project schedule	Internal	Can't occur until all previous complete	Project Manager

The next two sections of the report illustrate how the above strategy was arrived at using a colour coding system to visually identify priorities: the priorities were determined by combining the ‘ratings’ for decision making and timing. The Board or the Steering Committee could follow a similar methodology to confirm or revise the conclusions demonstrated in **Error! Reference source not found.** above.

5.1. Decision Making Powers

Error! Reference source not found. below maps out the actions or decisions in terms of who has the primary decision making powers, whether they be internal, external, or in partnership.

	indicates the choice of action or decision will depend on external support
	indicates the choice of action or decisions will require cooperation
	indicates the choice of action or decision can or must be made internally

Table 5.1-1

Action or Decisions	OPTIONS			
Determine preferred financing option	corporate loan	individual loans	City partnership (local improvement tax)	
Decide how to reduce total capital investment by Condo Corp owners	Choice of delivery methods	grants	sale of common property	individual assistance based on need
Determine preferred long term responsibility for infrastructure	Land transfer to City	O&M agreement with City	Maintain responsibility	
Determine preferred long term development options	remain as R5	change zoning regulations	change zoning district	
Determine the preferred technical design concept.	City Standard	Modified City Standard	Hybrid Utilidor	Hybrid Trucked
Adopt a project schedule	Incremental	Comprehensive		
Establish a communications strategy	minor effort	some effort	major effort	
Formulate a Recommendation	proceed immediately	seek legal counsel	confirm financial support	

5.2. Decision Making Timing

Table 5.2-1 below maps out when decisions will need to be made by, or if they are dependent on another prior decision.

	indicates the choice of action or decision can should be considered as soon as possible
	indicates the choice of action or decision will depend on other things happening first
	indicates the choice of action or decision is not critical to determine immediately

Table 5.2-1

Action or Decisions	OPTIONS			
Determine preferred financing option	corporate loan	individual loans	City partnership (local improvement tax)	
Decide how to reduce total capital investment by Condo Corp owners	Choice of delivery methods	grants	sale of common property	individual assistance based on need
Determine preferred long term responsibility for infrastructure	Land transfer to City	O&M agreement with City	Maintain responsibility	
Determine preferred long term development options	remain as R5	change zoning regulations	change zoning district	
Determine the preferred technical design concept.	City Standard	Modified City Standard	Hybrid Utilidor	Hybrid Trucked
Adopt a project schedule	Incremental	Comprehensive		
Establish a communications strategy	minor effort	some effort	major effort	
Formulate a Recommendation	proceed immediately	seek legal counsel	confirm financial support	