



Alternative Housing Development Options

DISCUSSION PAPER

Submitted by
Across the River Consulting

to



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1.0 Introduction

Under its current Housing Accelerator Fund Contribution Agreement, the Village of Carmacks committed to undertake high-level business case research on alternative/prefab/modular housing forms that may be applicable to the Carmacks context. The goal of this research is to evaluate the suitability of deploying prefab/modular forms for a 4-8 home development on Lot 127, a Village owned property, in the downtown core as a pilot project as an alternative to conventional stick-framed construction.



Subject property - Lot 127

This research considers and compares a range of manufacturer options with conventional construction for:

- costs;
- timetables;
- contractor availability;
- project management capacity;
- design flexibility and energy use; and
- local socio-economic benefits.

This paper concludes with recommendations for Council's consideration.

2.0 Site Assessments

Two standard pre-requisite site assessments were undertaken to evaluate the suitability of Lot 127 for any proposed housing form. These assessment reports are available for review separately as required.

Phase One Environmental Assessment

The assessment discovers no evidence of environmental contamination, risks or concerns regarding residential development at Lot 127. No further assessment is recommended.

Geotechnical Assessment

Lot 127 is suitable for shallow foundation systems for simple National Building Code Part 9 buildings (typically smaller single-residential or duplexes). Sub-excavations can be limited to 150mm with frost protection.

Manufactured homes that comply with CSA code A277 or Z240 are classed as deformation resistant homes, reducing the site preparation requirements.

3.0 Reference Cases

Three reference cases of potential alternative development forms were researched, reviewed and compared against a recent Carmacks development of conventional construction. Each form underwent desktop review of brochures, standard designs and services and interviews with company representatives.

3.1 Conventional Construction

Little Salmon/Carmacks First Nation completed conventional construction of two 4-plexes in 2025. Total costs were approximately \$525/ft². This is considered very efficient compared to recent public tender pricing of multiplex developments which have approached \$1,000/ft² for reference cases in Dawson and Watson Lake.

Allowing for inflation and market conditions, the 4-plexes provide a conservative cost estimate of a minimum of \$600/ft² in Carmacks for any new building which may well require the services of larger out-of-town contractors.

The 4-plexes are highly energy efficient and of good size, quality and amenities for this cost.

3.2 Modular Package – Built on Site

[Tamlin International Homes](#) of Coquitlam, BC is focussed on timber frame modular packages, which can be customized to need, although conventional 'stick' construction can also be supplied. Packages can be provided to match designs provided in the [CMHC Housing Design Catalogue](#) which is intended to speed up the design and local permitting process.

In this form, while there are some materials supply and construction speed efficiencies, the Village still needs to engage a willing, qualified General Contractor with suitable experience. Roofing materials and much of the interior work is not included. Costs are similar with conventional methods and design flexibility is reduced

compared to a full architectural design process. Overall, the benefits are limited, and it may just introduce extra complexities with multiple partners and ambiguity over responsibilities such as for warranties.

3.3 Modular – Factory Built

[Anhart Construction](#) of Hope, BC, provides modular homes with designs that can be customized. These homes are prebuilt in the factory to sizes that can be shipped as whole homes on trucks and installed at the site.

As ready-built homes, these require little work or project management by the Village after the design stage. They provide some design flexibility to adapt further from templates for energy efficiency. However, cost and timetable advantages were not as significant as would be hoped given the sacrifice of full design control, energy efficiency and local economic benefits of construction work. The supplier has no Yukon dealer or partner.

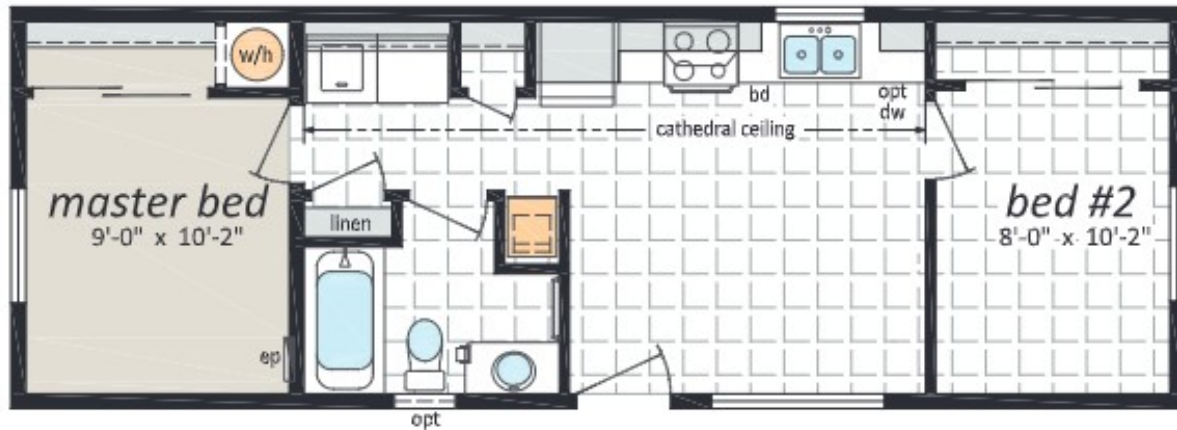
3.4 Manufactured Homes

[All Ready Homes](#) of Carcross, Yukon is a supplier of standardized, deformation-resistant manufactured homes that meet CSA Z240 codes required by the Yukon Building Safety and Inspections Branch. Factory built and delivered occupancy-ready to the site within 6 months, such homes are a rapid and efficient development methodology. Key advantages are a much lower relative cost (approx. \$350/ft²) and very little project management demand upon the Village's limited capacity. No general contractor is required, but the option does require a small amount of work to build a water house and plumbing and electrical connections. These homes can be installed with only surface clearing required.

There are limits to the energy efficiency upgrades that can be added to such factory homes. However, the modest home sizes planned (e.g. 560 ft²) already greatly reduce consumption for space heating such that any upgrades are of much lower benefit anyway. The greatest downside is the deficit of local economic and employment impacts. However, given the amount of residential building already planned over the next 1-2 years there is likely a shortage of local skilled tradespeople and no shortage of opportunities.



All Ready Homes two bedroom ranch house exterior rendering



All Ready Homes two bedroom ranch house blueprint

4.0 Review Matrix

The matrix below reviews each alternative building form against the base case of conventional construction as seen in the 4-plexes built by LCSFN in 2024-2025. Each form is provided a graduated negative or positive score for improvements or benefits relative to the base case.

Each form is evaluated by each of the criteria on a -3 to +3 score relative to the conventional construction base case.

Modular/ Manufactured Option	Cost Savings	Construction Timetable	Contractor Availability	Project Management Capacity	Design Flexibility (Energy Use)	Local Economic Benefits	Score
Modular – Package (Tamlin)	None (0)	Only moderate improvement (+1)	Similar (0)	Similar (0)	Less (-1)	Similar (0)	0
Modular – Built (Anhart)	Small (+1)	Moderate improvement (+2)	Almost zero need (+3)	Limited need (+2)	Less (-1)	Less (-2)	+5
Manufactured Home (All Ready Homes)	High (+3)	Significantly faster (+3)	Almost zero need (+3)	Almost zero need (+3)	Low (-2)	Low (-2)	+8

In the Carmacks context, deployment of standardized, factory manufactured homes are indicated to offer significant potential to increase housing supply faster, and at much lower cost, than conventional construction. This overcomes the significant challenges presented to low-capacity proponents such as the Village in a community with a limited residential development industry. The Village's piloting of factory manufactured homes

on Lot 127, a highly visible site in the heart of downtown, may inspire individual property owners to explore this option as well.

5.0 Conclusion and Recommendations

The conclusion of this high-level review is that factory manufactured homes are likely suitable as an important solution to overcoming short-term housing shortages in Carmacks. Lot 127 is a viable site for a pilot project to implement these homes.

Lot 127 is a modest but significant property in the Carmacks context. It has potential to host up to eight homes with good design. Site planning for the Lot 127 pilot should enable Council to consider advancing the factory modular home pilot to proceed with a limited number of homes (e.g. only two) during the initial stage. This will retain options for the remainder of the site to be developed with a conventional 4-6 plex if the pilot does not validate repetition.

Per the Housing Accelerator Fund work plan, the recommended next step is to undertake site planning, utility servicing and schematic designs for a Development Permit. Next steps should be based on the All Ready Homes proposal (confidential) prior to going to final tender for a home supplier. Work should include:

- Site plan to determine unit layouts and desired density;
- Landscaping and parking plan for aesthetic & lifestyle quality;
- Final unit specifications inc. heat source and insulations;
- Confirmation of building code compliance requirements;
- Utility services (power, sewer & potable water delivery shed); and
- Engagement with potential development partners.