

Interim Shelter and Housing Solutions Analysis

Administration has completed an analysis of each of the potential interim solutions. Information regarding capital and operating costs represent high level and preliminary estimates based on conversations with vendors and on the deployment experiences of other jurisdictions; as a result they are to be used for illustration purposes only and are subject to change.

Within the context of improved encampment resolution, the most effective place for the City to invest its relatively limited housing dollars is in advancing bridge housing and additional permanent supportive housing capacity in the short term.

Temporary Low-Barrier Shelter		
Service Model	Defined as short-term shelters that provide low-barrier services beyond those provided by existing shelters, such as extended operating hours, increased access to hygiene services, storage for resident belongings, increased privacy, and on-site housing workers to support transitions to permanent housing. For the purposes of the modelling below, it is assumed both options would be installed on a City-owned site provided at nominal cost.	
Construction Type	Sprung Shelter	Workforce Trailers
Number of Units	75 beds 1 large tent structure with cubicles containing beds and storage	40 beds 5 sleeping trailers (8-beds per trailer) and 1 support/intake trailer, and 1 washroom trailer
Building Footprint	7,200 square feet (60' x 120')	5,760 square feet (96' x 60')
Personal Space	64 square feet (8' by 8')	72 square feet (6' x 12')
Built Form	Quonset shaped, fully-insulated, membrane over metal structure erected on-site.	Single level workforce accommodation trailers with a hostel room layout.
Advantages	<ul style="list-style-type: none"> Implemented by other homeless 	<ul style="list-style-type: none"> Implemented by other homeless

	<p>agencies/municipalities</p> <ul style="list-style-type: none"> ● Rapid delivery ● No foundation required with appropriate soil conditions 	<p>agencies/municipalities</p> <ul style="list-style-type: none"> ● Rapid delivery ● Mobile and easily redeployed and re-used ● No foundation required with appropriate soil conditions ● Easy to scale based on need ● Fits on a variety of site sizes ● Hostel room layout allows for more privacy ● Less costly than traditional built form ● Consistent with recommendations in Report on Homeless Encampments on Public Land (March 2019)
Disadvantages	<ul style="list-style-type: none"> ● Physically resembles large, single structure encampment, difficult to blend into a community ● Less easy to scale down; base model may be larger than necessary for Edmonton ● Requires a larger site ● Not mobile; significant cost and effort to relocate ● May not appeal to individuals who avoid existing shelter options 	<ul style="list-style-type: none"> ● Physically resembles workforce accommodations used in oil fields; difficult to blend into a community ● May not appeal to individuals who avoid existing shelter options
Risks and Barriers	<ul style="list-style-type: none"> ● Rezoning and plan amendment requirements ● Community acceptance/appeals 	<ul style="list-style-type: none"> ● Rezoning and plan amendment requirements ● Community acceptance/appeals
Estimated Construction Timeline	9 weeks or more	10 weeks or more
Estimated Capital Cost	<p>\$1.65 million to \$ 2.5 million (75 beds) \$22,000 to \$25,000 per bed</p> <p>(Excludes cost of land)</p>	<p>\$1.1 million (40 beds) \$27,000 per bed</p> <p>(Excludes cost of land)</p>
Estimated Annual Operating Cost	<p>\$1.6 million (75 beds) \$16,000 per bed</p>	<p>\$680,000 total (40 beds) \$17,000 per bed</p>

Bridge Housing			
Service Model	Non-self-contained housing (eg. congregate living) provided as a temporary, safe place for individuals to stay for up to 90 days and receive social supports prior to securing permanent housing. Bridge housing is most effective when barriers to access are low, ongoing engagement and support are housing-focused and can be adapted to meet individual needs, and services are immediately available to individuals whose needs cannot be met by existing shelter options. Bridge housing can also lessen the challenges associated with the reality of transiency by reducing the time and resources needed to locate individuals sleeping outside. For the purposes of the modelling below, it is assumed both the modular purpose-built and the workforce trailer options would be constructed on a City-owned site provided at nominal cost.		
Construction Type	Modular Purpose-Built	Acquire Existing Building	Workforce Trailers
Number of Units	50 beds	45 beds	32 beds
Building Footprint	15,900 square feet	9,100 square feet	6,411 square feet
Unit Size	220 square feet	Variable	200 square feet
Built form	Three-storey off-site constructed modular structure	Multi-storey apartment building, congregate living facility or hotel	Modular work camp trailer
Advantages	<ul style="list-style-type: none"> • Longer-term response - 40 year lifespan • Can be built on-demand in six months or less • Fixed price and labour cost • Lower cost than traditional built form • Architectural exterior finishes, blends better into surrounding neighbourhood • Can be relocated • Lower cost and faster implementation than traditional built form • New mechanical systems provide more cost certainty 	<ul style="list-style-type: none"> • Could serve as increased system infrastructure over the medium- to long-term (depending on condition) • Architectural exterior finishes • Already blends well into surrounding neighbourhood • Potential for minimal construction required • May not require rezoning/plan amendment 	<ul style="list-style-type: none"> • Simple, new mechanical systems and infrastructure unlikely to require immediate repairs or retrofits • Mobile and easily re-deployed and reused • Faster implementation compared to other options

	than existing building or repurposed workforce trailers		
Disadvantages	<ul style="list-style-type: none"> • May be challenging to locate a new site if relocation is required • Rezoning is likely required, and a possible plan amendment 	<ul style="list-style-type: none"> • Limited inventory of buildings with non-self-contained (eg.congregate living configurations) • Potential for higher than anticipated required retrofits/upgrades • Inflexible compared to other options 	<ul style="list-style-type: none"> • Industrial exterior finishes; will not blend well into surrounding neighbourhood, which could limit potential sites • Units will not retain value over long term • May deteriorate more quickly than other options • Better suited to a shorter term response
Risks and Barriers	<ul style="list-style-type: none"> • Rezoning and plan amendment requirements • Community acceptance/appeals 	<ul style="list-style-type: none"> • Bringing buildings up to code/mechanical systems upgrades and renovations • Rezoning and plan amendment requirements • Community acceptance/appeals 	<ul style="list-style-type: none"> • Rezoning and plan amendment requirements • Community acceptance/appeals
Estimated Construction Timeline	6 months	3 months to 1 year or more	2 to 5 months
Estimated Capital Costs	<p>\$6.1 million (50 beds) \$122,000 per bed</p> <p>(Excludes cost of land)</p>	<p>\$6 million (45 beds) \$120,000 per bed</p> <p>(Includes land and building acquisition and renovation costs)</p>	<p>\$1.6 million (32 beds) \$50,000 per bed</p> <p>(Excludes cost of land)</p>
Estimated Annual Operating Costs (includes supports)	<p>\$2 million total (50 beds) \$40,000 per bed</p>	<p>\$1.8 million total (45 beds) \$40,000 per bed</p>	<p>\$1.2 million total (32 beds) \$38,000 per bed</p>

Expedited Permanent Supportive Housing				
Service Model	Rapidly deployed permanent supportive housing facilities including self-contained apartments and on-site support services for chronically homeless residents with complex and persistent challenges such as mental and physical health barriers and addictions issues. For the purposes of the modelling below, it is assumed all options, except for the acquisition of an existing building, would utilize a City-owned site provided at nominal cost.			
Construction Type	Modular Permanent Supportive Housing	Acquire Existing Building	Tiny Homes	Traditional Build (for comparison)
Number of Units	50 units	40 to 60 units (Depends on building)	15 units or more (Depends on site)	40 units
Building Footprint	15,900 square feet	Up to 40,000 square feet (Depends on building)	35,000 square feet	30,000 square feet
Unit Size	350 square feet	Variable	276 - 380 square feet each	350 - 400 square feet
Built form	Modular multi-storey apartment building	Multi-storey apartment building or hotel	Small, standalone housing structures arranged in groups	Multi-storey apartment building
Advantages	<ul style="list-style-type: none"> • Medium to long-term asset • Can be built on-demand in six months or less • Fixed price and labour cost • New mechanical systems increase cost certainty • Can be relocated if necessary; allows for temporary use on sites planned for future 	<ul style="list-style-type: none"> • Medium to long-term asset • Opportunity to establish housing solution in neighbourhoods outside the city core, in alignment with Council direction • Reduced construction requirement • Structure likely to be serviced • Structure likely to be 	<ul style="list-style-type: none"> • Quickly deployed • Fixed price and labour cost • Can be relocated if necessary • New mechanical systems increase cost certainty 	<ul style="list-style-type: none"> • Long-term asset • Best opportunity to establish housing solution in a larger number of neighbourhoods • Easily customized to meet specific program and client needs (ex. commercial kitchen, health care spaces) • Visually indistinguishable from other residential

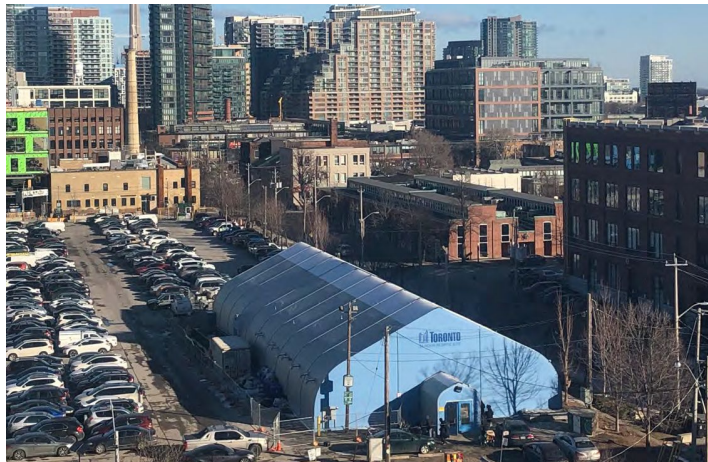
	<ul style="list-style-type: none"> development Proven efficacy in other Canadian markets i.e. Vancouver, Maple Ridge, etc. Architectural finishes increase ability to blend into existing neighbourhoods 	<ul style="list-style-type: none"> appropriately zoned Already blended into an existing neighbourhood 		<ul style="list-style-type: none"> development Units more likely to retain value over time
Disadvantages	<ul style="list-style-type: none"> May be challenging and/or costly to relocate units Units may not retain value over long term 	<ul style="list-style-type: none"> Limited inventory of suitable buildings Retrofitting almost certainly required Inflexible compared to other options Units more likely to retain value over time 	<ul style="list-style-type: none"> Made to order Depreciating asset with limited service life Lower density compared to other options; requires more land to achieve scale Challenges blending well into an existing neighbourhood 	<ul style="list-style-type: none"> Longest time to deliver from project initiation to opening the doors (2-3 years)
Risks and Barriers	<ul style="list-style-type: none"> Rezoning and plan amendment requirements Community acceptance/appeals 	<ul style="list-style-type: none"> Bringing buildings up to code/mechanical systems upgrades and renovations 	<ul style="list-style-type: none"> Rezoning and plan amendment requirements Community acceptance/appeals 	<ul style="list-style-type: none"> Cost overruns or project delays Rezoning and plan amendment requirements Community acceptance/appeals
Estimated Construction Timeline	6 months or more	3 months or more	7 months	2 to 3 years
Estimated Capital Costs	\$6.2 million to \$7.3 million (50 units) \$124,000 to \$146,000 per	\$5.5 million to \$12 million (50 units) \$137,500 to \$240,000 per	\$1.6 million (15 units) \$106,000 per unit	\$7.6 million (40 units) \$192,000 per unit

	unit (Price depends on commercial kitchen, Excludes cost of land)	unit (Includes land and building acquisition and renovation costs)	(Excludes cost of land)	(Excludes cost of land)
Estimated Annual Operating Costs (net cost, includes supports and rental revenue)	\$1.3 million (50 units) \$26,000 per unit	\$1.3 million (50 units) \$26,000 per unit	\$400,000 (15 units) \$27,000 per unit	\$1.1 million (40 units) \$28,000 per unit

Housing Option Descriptions and Examples

Temporary Low-Barrier Shelter - Sprung Shelter

A sprung shelter is made of steel framing with a high-tensile fabric stretched over it. These structures are available from the manufacturer in a variety of sizes, shapes, and configurations. They create a large open environment similar to a warehouse, at a fraction of the cost. The interior can be divided into any configuration desired, and can include rooms, second floors, washrooms and kitchens, or large open plan areas. In the context of serving as an augmented shelter, the sprung structure can be used to provide additional shelter services. Sprung structures are currently in use for homelessness applications in Los Angeles, Toronto (below left), Portland, and Seattle. The configuration (see below right) in Los Angeles is seen as preferential because the layout features some privacy and storage, compared to traditional shelter. Occupants have a cubicle with privacy partitions a bed and storage space.



Sprung structure 24-Hour respite centre in Toronto, ON.



Interior layout of Sprung structure in Los Angeles, CA.

Temporary Low-Barrier Shelter - Workforce Trailers

This type of lower-barrier shelter will allow for even more privacy and less disturbed sleep than a traditional shelter and they also include storage for personal belongings and feel less institutional. The Navigation Centres model, which were recommended in the Org Code report use this style of dorm and are considered low barrier. Because the model is smaller, they have less impact on a neighbourhood and are more appealing to clients. Work accommodation trailers are currently available in a variety of configurations and can be moved on site in a number of weeks. They come in a variety of sizes and layouts, from self contained motel version, to multi-bed dormitories.



Workforce accommodations made up using several portable modules.



Interior layout of portable workforce trailers as augmented shelter.

Bridge Housing - Modular Purpose-Built

The City can purchase a modular building that is manufactured in western Canada and work with Homeward Trust to contract an operator for the facility through a request for proposal process. The cities of Vancouver (see example below), and Maple Ridge have currently made use of this approach to dramatically increase their ability to address homelessness in a short period of time. The modular housing can be deployed in as little as 6-9 of weeks when a suitable site is available. Modular buildings are well suited to the urban environment because they can be located on typical lot sizes and assembled as multi-storey buildings. They may include onsite care and amenity space, landscaped yards and decorative architectural treatments that help them fit in with the surrounding community in a way that work trailers cannot.



Modular permanent supportive housing in Vancouver B.C.



Standard room in the modular housing development.

Bridge Housing - Acquire Existing Building

The City can explore acquiring an existing building for use as bridge housing units. Prior to being used as bridge housing, the property must be rehabilitated to meet current safety codes and living standards. Under this option, the City could pursue the purchase and rehabilitation of an approximately 50-unit building. Support services may be provided on-site if the building has been appropriately retrofitted and has the appropriate zoning and development permit, otherwise they would need to be in-reached. When this bridge housing is no longer required, the City may consider opportunities to transition the building into permanent supportive housing.



Renovated and re-purposed hotel in Calgary (Centre 4800) Image courtesy of CTV Calgary.

Bridge Housing - Workforce Trailers

In the context of permanent supportive housing work trailers could be assembled similar to a modular building, but they are typically only a single level. They can be designed with self contained units, or communal design depending on the specifications provided to the manufacturer.



Semi-self contained accommodation made from portable modules for bridge housing/continuous stays.

Expedited Permanent Supportive Housing

This option considers strategies for rapidly deployed permanent housing developments combined with individualized, flexible and voluntary support services for chronically homeless residents with complex and persistent challenges such as mental and physical health, developmental disabilities and addictions issues. The built form could be modular structures, or other temporary building types, or a permanent structure.

Expedited Permanent Supportive Housing - Modular Permanent Supportive Housing

This would be the same type of structure as described in the section on “Bridge Housing”. B.C. Housing has deployed this approach to housing in 30 communities in the province and continues to deploy this model. There are over 12 modular bridge housing and permanent supportive housing developments in Vancouver, and one in Maple Ridge B.C.



Larwill Place is a supportive housing development at 610 Cambie Street in Vancouver BC

Expedited Permanent Supportive Housing - Acquire an Existing Building

In this scenario the City can look for opportunities to purchase an existing apartment or hotel building. The City can remain active in reviewing marketplace real estate opportunities, however, these present the biggest constraints and risks to the City. This is because there is a limited supply of suitable buildings and the acquisition of a new building requires a thorough assessment of the suitability of the regulatory environment and the structure in order to ensure it meets the desired use as permanent supportive housing. In any given real estate scenario, it may not be possible to obtain permits to operate a Group Home or Lodging house without rezoning. Buildings may require significant investments and upgrades of the mechanical and ventilation or fire safety systems. This all adds time to assess, procure services and apply for and obtain permits and complete construction prior to turning over to an operating body.

Expedited Permanent Supportive Housing - Tiny Homes

Tiny homes are a form of housing with a small footprint that is designed to be self-contained. Each home is less than 300 square feet in size, but fully equipped with all the features of a larger home. Tiny homes on a foundation can include portable dwellings moved onto a site or dwellings constructed on-site, which are affixed to the land. The tiny homes village can incorporate a central resource centre, counselling office, community garden or other amenities.



Calgary Homes for Heroes site - development completed as of November 2019.

Other options considered but determined not viable

Administration conducted assessment, research and consulted with housing providers and determined that the following options were not likely to be viable solutions to the homelessness response in Edmonton.

- Scattered sites - too inefficient for addressing the complexity of a population needing on-site supports.
- Head leasing an existing building - difficult to find acceptable space, and might not be compatible with other users of the building.
- Legalized camps - these sites are typically difficult to manage and normalize homelessness.