Backgrounder: New research—Canada's housing challenge is also an infrastructure challenge

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In the last year alone, Canada's population grew by more than 1.1 million. As our country rapidly grows, **housing affordability and chronic homelessness are** an urgent concern, with local governments on the frontlines of tackling this challenge.

To restore housing affordability to levels last observed in 2004, the Canada Mortgage and Housing Corporation (CMHC) has estimated that we need to build **5.8 million new housing units** by 2030—3.5 million above the 2.3 million units projected based on current rates of construction.

We know with every home built, there is a corresponding infrastructure need that must be met. All new housing is dependent on municipal infrastructure, from roads, to water and wastewater facilities, to community amenities, public transit, and more.

Estimated cost of municipal infrastructure for new housing

In 2023, FCM undertook research to determine the level of investment in municipal infrastructure that would be required to unlock 5.8 million new housing units.

The average cost per dwelling unit was calculated by dividing the total replacement value of municipally-owned infrastructure (*see Table 1*) from Statistics Canada's 2020 Core Public Infrastructure (CCPI) Survey by the number of private dwelling units in Q2 2020 (16,107,003 units, according to Statistics Canada GDP data). By indexing this average unit cost to 2023 construction prices (based on the Building Construction Price Index), FCM determined that a housing unit requires an average investment of around **$107,000** in municipally-owned capital assets.

If we assume that the 5.8 million net new housing units will be built to the same standard as today's existing housing stock, we can therefore estimate that the level of investment in local infrastructure to support those units is equivalent to about $600 billion.

Table 1: Infrastructure Replacement Cost by Asset Category

Asset class	Total replacement value of municipally-owned core public infrastructure, 2020 (x $1,000)	Total adjusted for construction cost inflation, Q3 2023 (x $1,000)	Replacement value in 2023, per dwelling (16,107,003 units)
Road assets	$439,505,400	$570,387,523	$35,412
Bridge and tunnel assets	$45,258,200	$58,735,826	$3,647
Public transit assets	$33,564,000	$43,559,162	$2,704
Active transportation	$29,972,900	$38,898,653	$2,415
Potable water assets	$226,373,900	$293,786,716	$18,240
Wastewater assets	$256,925,000	$333,435,754	$20,701

Stormwater assets	$181,694,300	$235,801,794	$14,640
Solid waste assets	$7,504,400	$9,739,166	$605
Culture, rec, sports assets	$107,729,600	$139,810,841	$8,680
TOTAL	**$1,328,527,700**	**$1,724,155,434**	**$107,044**

At a local level, the investment in infrastructure to support a new housing unit depends on **the type of dwelling unit** (e.g., single-detached, row, or apartment unit) and whether the development is taking place in an **existing neighbourhood or new community** (infill or greenfield development), as well as local factors such as geography and construction prices. As such, local estimates will vary from the national average determined by FCM.

Studies undertaken by municipalities consistently show that lower-density housing is more expensive to service (*see Box 1*). While increasing density in existing neighbourhoods is generally more cost-effective, significant investment is still required if the capacity and condition of existing infrastructure cannot accommodate increased demand. In order to add density within existing neighbourhoods and towns and create more compact, transit-oriented communities, municipalities need to increase the level of investment renewal and the expansion of existing infrastructure.

__Box 1__: A 2021 study commissioned by the City of Ottawa demonstrated that servicing low-density greenfield development costs the City __$465 per person per year__ while high-density infill development provides the City with __$606 per capita of revenue per year__.

A 2023 study by Metro Vancouver determined that the costs for onsite infrastructure for a single-family house were __5 to 9 times more expensive on a per capita basis__ when compared to the costs of infrastructure for an apartment development.

It was beyond the scope of this research to account for differences in dwelling type or local conditions for each of the 5.8 million new units at the national level. However, by using a combination of infrastructure replacement value data and private dwelling statistics, it is possible to estimate the national cost of municipal infrastructure required to unlock Canada's needed housing supply.

Importantly, FCM's national estimate does not include the costs needed to:

- Operate and maintain the asset over its lifespan
- Adapt to climate change or build low-carbon infrastructure
- Provide emergency services, civic buildings, health and education assets, information technology, and electrical utility infrastructure—all of which are required to support housing within a complete community and which are not covered by the CCPI survey.

Municipalities limited by outdated funding model

The outdated funding model that municipalities operate under leaves them with limited options to pay for growth-related infrastructure.

Property taxes and development charges act as the most prominent (and often, only permitted) fiscal tools. Municipalities can also borrow to pay for infrastructure, repaying that debt with revenue that is primarily derived from property taxes and development fees. While the structure and rate of municipal taxation varies across the country subject to provincial and territorial legislation, municipalities are generally over-reliant on property taxes and lack sources of revenue that grow with the economy and population.

To turn Canada's historic growth into the success it needs to be, we must build functioning, well-serviced communities, not just individual housing units.

If we are to build **5.8 million homes** by 2030, there must be a commensurate investment in the infrastructure and services required to support a significant number of new units and the communities they are a part of. With limited options to pay for growth, municipalities need a new fiscal model—a Municipal Growth Framework—that involves all orders of government to increase housing development and achieve CMHC's target.

FCM is calling for a national discussion on a new **Municipal Growth Framework,** that links municipal funding with economic and population growth—helping to unlock municipal capacity and a better quality of life for all Canadians.

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