

**IDEA FOUR**



**Small Scale  
Ground Oriented  
Residential infill**

**Cover Image**  
**Rendering of Residential Infill: IBI Group**



## 1.0 INTRODUCTION

Small scale ground oriented residential development offers viable intensification and reinvestment options for Edmonton's inner city, mature neighbourhoods, and newer suburban communities. This scenario has been prepared to explore options to encourage sensitive small scale infill or new development.

Infill development can be defined as development that fills in the gaps in existing neighbourhoods. For the Edmonton context, small-scale residential infill ranges from

- development on a single lot where a property owner adds a secondary suite to accommodate an elderly parent or university aged child, or gain some revenue,
- duplex,
- triplex,
- fourplex,
- a series of lots with single family housing, or
- up to 8 units of townhouse development.

New suburban areas are planned and built in large land blocks and are not the target for this small scale infill discussion, although where remnant blocks of land are left vacant in new neighbourhoods, small scale ground oriented development could occur.



D. Hunneman: **Single Family**



D. Hunneman: **Triplex**



D. Hunneman: **Duplex**



I. Lewis: **Fourplex**



D. Hunneman: **Townhouses**

## 1.0 INTRODUCTION con't

The concept of small scale ground oriented residential development envelops the idea of housing units that make sense in Edmonton's mature and suburban neighbourhoods by adding housing units and providing housing choices. Small scale residential infill development is a smart choice as it meets the four fundamentals of Smart Choices – Options, Vitality, Viability and Access.

### OPTIONS

- Small scale residential infill offers different housing options for city residents within existing neighbourhoods.
- It provides opportunities for residents to choose different modes of transportation, have shorter commute times and distances travelled by providing housing options closer to where they work and shop.

### VITALITY

- Residents of small scale residential infill development have the option for more social interaction as more people in a neighbourhood make for a more vital neighbourhood.
- More people in the neighbourhood will better support commercial establishments, potentially resulting in a more vibrant community.
- More people living in closer proximity to daily activities will likely result in less vehicle travel, thus benefiting the environment by less air and water pollution. This creates a more vital, healthy city.

### VIABILITY

- Small scale residential infill provides homeowners the opportunity to reinvest in their property by building a suite and gaining revenue.
- It provides developers the opportunity to reinvest in Edmonton's communities.
- Small scale residential infill better utilizes infrastructure including storm and sanitary lines, power and telephone, and gas connections. Utilizing existing infrastructure can result in more viable development projects.

### ACCESS

- Small scale residential infill housing results in more residents in existing neighbourhoods. These residents will have access to services such as schools, libraries, parks and open space as well as existing fire and police services.



IBI Group: Rendering on Small Scale Infill Development

## 2.0 DISCUSSION

### Why does Edmonton Need Small Scale Residential Infill Development?

The City of Edmonton estimates that approximately 140,000 people will move to Edmonton over the next 20 years as 100,000 new jobs are created in the city. The greatest increase in growth is expected in people age 50 and over, with the second largest increase expected for people in their 20s. As well, Edmonton's many post secondary schools including the University of Alberta, NAIT, Grant MacEwan, and community colleges and computer institutes continue to attract people to the city. Housing options will be increasingly important as Edmonton's population and household makeup continues to change, and more students attend post secondary institutions. All these Edmontonians will require a variety of housing options including apartments, their first homes, appropriate retirement housing, and housing that meets the needs of empty nesters.

### Conventional Small Scale Housing

The following conventional housing options, both for existing development and new development, are currently used within Edmonton.

#### Existing Development

Existing development refers to an existing house on a lot that may accommodate a secondary suite.

#### EXISTING BUILDINGS/LOTS

- Small scale infill housing can be in the form of secondary suites such as a basement suite or a suite over a detached garage.
- As well, a suite may be accommodated in a separate building called a modular unit or granny suite.
- A residential suite over an existing or new commercial establishment allows the option to work and live in the same location.

#### AGING, OBSOLETE OR DILAPIDATED BUILDING

- These types of buildings offer a good opportunity for infill development, and may be torn down to accommodate another single family house, a duplex, and triplex or fourplex, if the lot size is sufficient.



D. Hunneman: **Granny Suite Over Garage**



D. Hunneman: **Residence Over Commerical Space**



D. Hunneman: **Older Housing**



## 2.0 DISCUSSION con't

### New Development

New development is residential small scale construction on a vacant lot or a series of lots.

#### VACANT LOT

- On a vacant lot, small scale infill housing can take the form of a duplex or triplex, and in some cases, if the lot is large enough, a fourplex.



D. Hunneman:

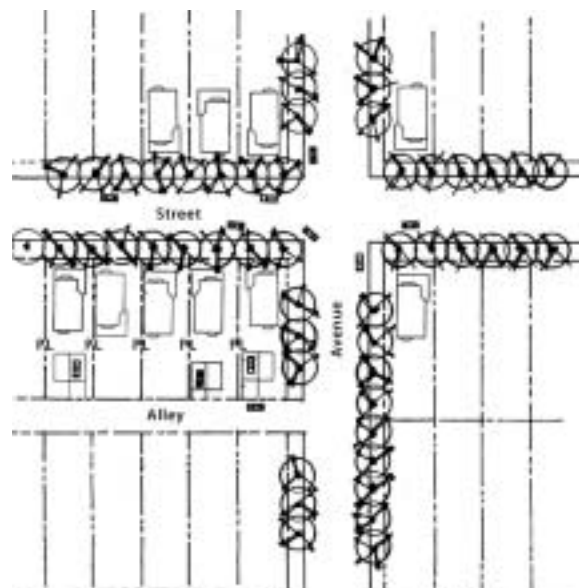
New Development on Vacant Lots

#### NEW BUILDINGS ON A SERIES OF LOTS

- A developer may choose to build single family houses or a series of townhouses on a number of lots.

#### ZERO LOT LINE DEVELOPMENT

- Zero lot line development situates a house on one of the side lot lines, or sometimes on the rear or front lot line, to maximize available yard space. Houses placed on one of the side lot lines doubles the amount of useable space on the other side. This type of development is allowed in the RPL Zone (Residential Planned Lot) of Edmonton's Zoning Bylaw, and may offer options for interesting small scale infill design in existing neighbourhoods.



IBI Group: Example of Zero Lot Line Development

### Non-Conventional Housing Options

#### VARYING SUBDIVISION DESIGN

- In many of Edmonton's older communities, the target neighbourhoods for this discussion, the lots were designed with 50' widths. These 50' lots can be subdivided into other configurations such as subdividing a 50' lot into two 25' lots; or two 50' foot lots divided into a 75' lot and a 25' lot, or into three 33' wide lots. These varying lot widths offer building size and placement options, and may allow more property ownership and affordable housing for Edmonton.



IBI Group: Varying Subdivision Design



D. Hunneman: Infill Houses

## 2.0 DISCUSSION con't

### RIVERBOAT COMMUNITY

- A riverboat community situated on the river adjacent to one of Edmonton's river valley communities could offer an infill housing option in a unique way. Edmonton is sometimes referred to as 'River City' and a riverboat community would enhance this image. Houseboats could be sited adjacent to existing services, and would allow more people to live in the river valley. As the people in these communities would reside in the valley, they would add a sense of security to the parks and trails systems in the valley.



IBI Group: **Rendering of River Valley**

### Obstacles to Development

Small scale infill development is occurring in Edmonton, however there are a number of obstacles that affect Edmonton's ability to implement infill in existing neighbourhoods in a progressive way.

### Community Reaction

- Generally, people do not like change and often fear the unknown. Adjacent homeowners fear reduced parking, inconvenience and traffic congestion during construction, increased density, displacement of a neighbour, and lack of compatibility with their home or street. If people are fearful of a project they may choose to protest against it, which can be a barrier to project acceptance, even for a small scale project.



D. Hunneman:

**Large Scale Infill in Single Family Neighbourhood**

### Contaminated Sites

- A site contaminated by a previous use such as a gas station or drycleaner will require environmental assessment and potential clean up. Often these sites are on corner lots adjacent to existing residential uses. These lots could accommodate a couple of townhouses, or be used again for a single family house, but the assessment and testing add time and costs to the construction of the housing units.



D. Hunneman: **Old Gas Station Site**

### Zoning Bylaw

- The Zoning Bylaw specifies the number of stalls per unit. This can limit the number of units that can be incorporated on a site.
- The Zoning Bylaw regulates lot coverage and setbacks. This can restrict the size and number of units allowed on a site.

### 3.0 FITTING INTO EDMONTON NEIGHBOURHOODS

Small scale infill development is a good option for Edmonton as it will add housing that meets the needs of city residents. Some design elements that are part of quality small scale infill are:

#### Existing Development

##### SECONDARY SUITES

- A secondary suite, such as a basement suite, should occupy 50% or less of the total building square footage.
- A suite over a detached garage should be a single storey only.
- residential suite over an existing commercial establishment should be a single storey.

##### MODULAR UNITS

- The size of modular units, such as a granny suite, should range between 500 and 800 square feet.
- The height of a modular unit should be no greater than the primary building.

##### PARKING

- Parking for suites and modular units should be accommodated on site when possible.

#### New Development

##### RELATIONSHIP TO THE STREET

- Entrances should be designed to face the street directly, as is typical in Edmonton.
- Porches and verandahs may be incorporated into the unit design when used on the rest of the street.
- Front setbacks should be similar to existing setbacks on the street to provide a consistent look to the street.

##### LOTING PATTERN

- Infill development can be accommodated on typical lots within neighbourhoods designed on the traditional grid pattern or cul-de-sac layout. Lots on corners and with alleys will accommodate infill development.

##### STREET TYPE

- New development can be accommodated on local, collector, or arterial roads, as existing development in Edmonton does today.



I. Lewis: **Single Family Infill**



D. Hunneman:  
**Single Family Infill**



I. Lewis: **Rear Parking at a Fourplex**

##### PARKING

- Parking should provide adequate stalls for all residents of the units.

##### BUILDING MASSING / DESIGN

- Housing units that match the size and style of the existing units should be utilized when possible.
- Height limits on small scale infill of up to 2 1/2 stories will fit with most Edmonton neighbourhoods.



### 3.0 FITTING INTO EDMONTON NEIGHBOURHOODS can't

#### ENVIRONMENTAL CONSIDERATIONS

- Existing trees on individual lots should be preserved when possible, as many of Edmonton's mature neighbourhoods are defined by their stately trees.

#### FAÇADE TREATMENT

- Door and window treatment should fit with other houses on the street where possible. Façade materials should match or complement existing materials on the street.

#### PRIVACY ISSUES

- With increased people in an area, privacy issues can arise. Windows should be located to limit views into other windows.
- Private open space should be included for all residents.



IBI Group: **Duplex Infill Housing**



D. Hunneman: **Single Family Housing**

## 4.0 IMPLEMENTATION

Implementation of small scale infill residential development will require:

#### 1. City Council Support

Generally, successful small scale residential infill development hinges on support and promotion by City Council and the Administration. Support can be demonstrated through providing clear direction in statutory planning documents such as Plan Edmonton, the Zoning Bylaw, and Area Redevelopment Plans.

#### 2. Zoning Bylaw Changes

Consideration should be given to relaxation of parking requirements, lot coverage and building setback as set out in the Zoning Bylaw. This can be determined on a site-by-site, project-by-project basis, depending on the intended occupants, proximity to transit services and day-to-day activities such as shopping, schools, libraries etc.



IBI Group: **Artists Rendering of Infill Fitting into the Neighbourhood**

## 4.0 IMPLEMENTATION con't

### 3. Educating the Community

By providing clear and easy-to-understand promotional and educational materials, the City Administration can assist homeowners and the community in better understanding the permitting process and development requirements. A better understanding will result in better small scale projects.

### 4. Clean up of Potentially Contaminated Sites

As discussed, some corner lots adjacent to existing residential blocks of land may have accommodated uses such as gas stations or dry cleaners, and if not contaminated could offer opportunities for small scale residential development. The City could work with other levels of government to offset the cost of redeveloping contaminated sites.



D. Hunneman: **Infill development**



D. Hunneman: **Infill in a Neighbourhood**

## 5. Design Considerations

Homeowners should ensure that their infill projects match the size and scale of buildings on the street, and have façade treatment including entrances and windows facing the street. Porches and verandahs may be incorporated when typically used in the neighbourhood.

When developers are incorporating a small scale single family housing or townhouse development into an existing neighbourhood, they should ensure the massing of the project fits with the scale and size of the existing neighbourhood, and that the units are designed to relate to the street through the use of street facing entrances, windows, porches or verandahs.

For both homeowners and developer projects parking should be accommodated on site to lessen the impact of congestion on the street. A reduction of parking requirements may be considered at development permit stage if requested by the applicant and services such as transit and bike paths are near.

## 5.0 APPLICATION

Generally, small scale residential infill development can occur in existing houses or on their lots (such as secondary suites), on a vacant lot or lots, or parcels with deteriorating housing stock. To ensure the best possible fit into Edmonton's existing fabric, it is recommended that the types of small scale residential infill development discussed here be applied in the following locations:

### TYPICAL LOT ON A STREET WITH AN ALLEY

- Secondary Suites
- Duplex, Triplex and Fourplex Housing
- Varying Subdivision Design
- Zero lot line development



IBI Group: **Typical lot on street with Alley**

## 5.0 APPLICATION con't

### TYPICAL LOT ON A STREET WITHOUT AN ALLEY

- Secondary Suites
- Duplex
- Varying Subdivision Design
- Zero lot line development



IBI Group: **Typical lot on a Street without an Alley**

### CORNER LOT WITH ALLEY

- Secondary Suites
- Duplex, Triplex, and Fourplex Housing
- Varying Subdivision Design
- Zero lot line development



IBI Group: **Corner Lot with Alley**

### CORNER LOT WITHOUT ALLEY

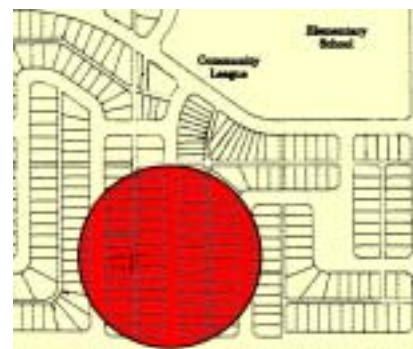
- Secondary Suites
- Duplex
- Zero lot line development



IBI Group: **Corner Lot without an Alley**

### AN ASSEMBLY OF LOTS

- Single Family Housing with or without an accessory suite
- Townhouse Developments
- Triplex and Fourplex Housing
- Varying Subdivision Design
- Zero lot line development



IBI Group: **An Assembly of Lots**



## 6.0 OUTCOMES

Small scale residential infill development in Edmonton's mature and suburban neighbourhoods will result in both positive and negative outcomes.

AFFECTED STAKEHOLDERS	POSITIVE OUTCOMES	NEGATIVE OUTCOMES
Property Owners	<ul style="list-style-type: none"> <li>• Opportunity to house elderly relative or university aged student on the property.</li> <li>• Opportunity to generate additional income.</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of private open space.</li> <li>• Potential parking problems.</li> </ul>
Development Industry	<ul style="list-style-type: none"> <li>• More choices in sites to develop.</li> <li>• Can be part of the community revitalization process.</li> </ul>	<ul style="list-style-type: none"> <li>• Success of individual property owner in the small scale market may impact the development market for medium density infill development.</li> </ul>
Community/Neighbourhood Residents	<ul style="list-style-type: none"> <li>• Use of existing infrastructure and services</li> <li>• Revitalization of community through replacement of aging /obsolete building and investment of property owners in their housing.</li> <li>• Affordable housing in immediate neighbourhood.</li> <li>• More people in the neighbourhood creates potential for safer neighbourhoods (more eyes on the street).</li> </ul>	<ul style="list-style-type: none"> <li>• Potential for traffic, parking conflicts.</li> </ul>
The City of Edmonton	<ul style="list-style-type: none"> <li>• More efficient use of existing infrastructure and services.</li> <li>• Potentially less tax dollars required for new infrastructure.</li> <li>• More property tax revenue.</li> </ul>	<ul style="list-style-type: none"> <li>• Pressure from increased use of infrastructure and services.</li> </ul>