

RD APPROPRIATION

MARCUS POON THESIS DECEMBER 2017

Housing continues to be one of the major issues for the planning and growth of the City of Toronto. Characterized by rapid growth in terms of volume of construction, and volume of sales in the recent few years, houses have started a shift from its role as not only a basic provider of shelter, to one that is also a commodity. Due to a variety of factors, the average cost of homeownership has greatly outpaced the earning ability of Toronto's average wage earner - with the typical suburban house doubling in price in the past ten years.

However, housing remains a necessity, whose fundamental purpose is to provide a place for its inhabitants to live. Purchasing a unit in a high density high rise towers on average cost half as much as a single family detached home in the suburbs. This may be one of the many reasons why high rise sales volume has been increasing at a pace that far exceeds its historical average.

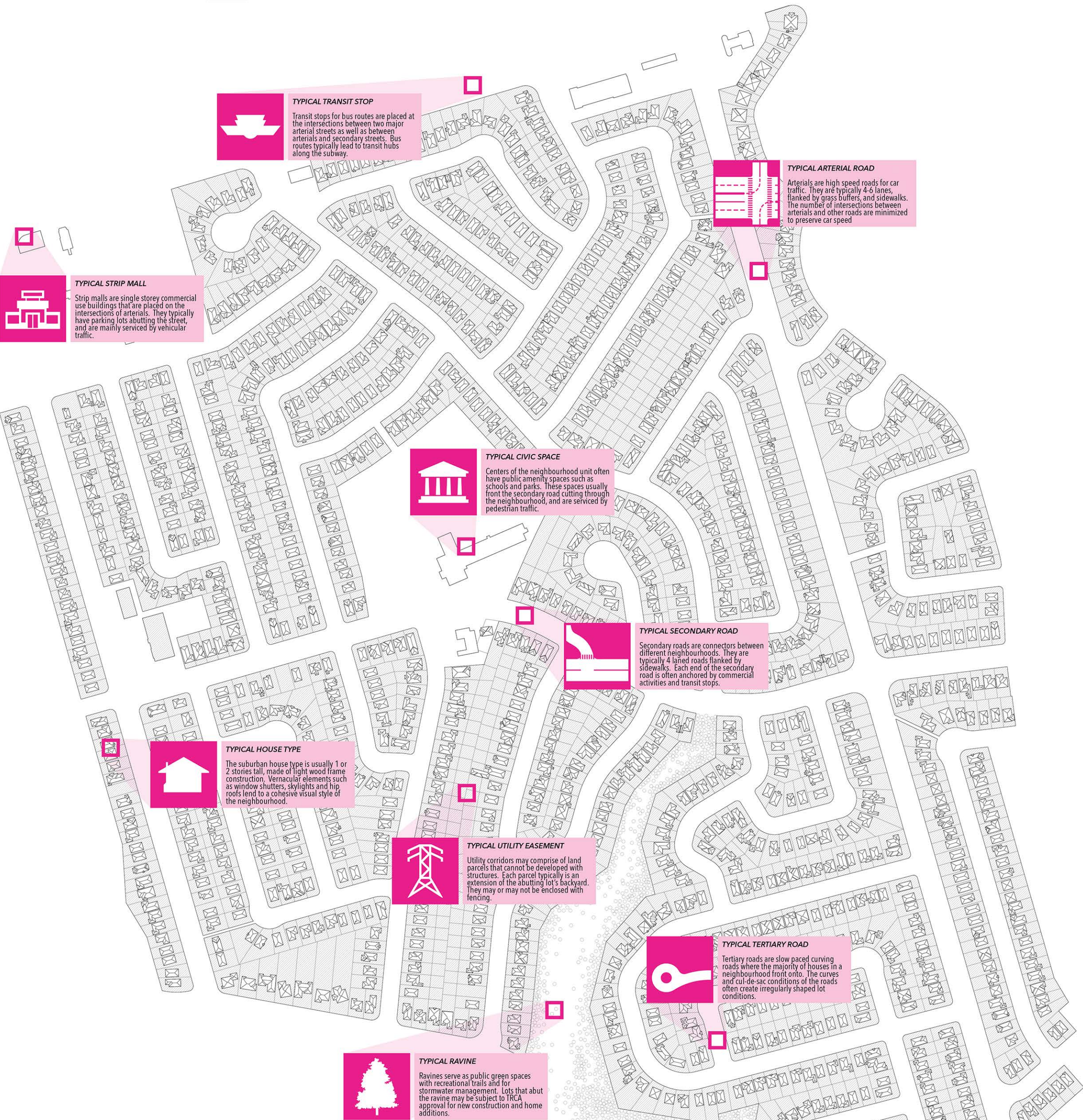
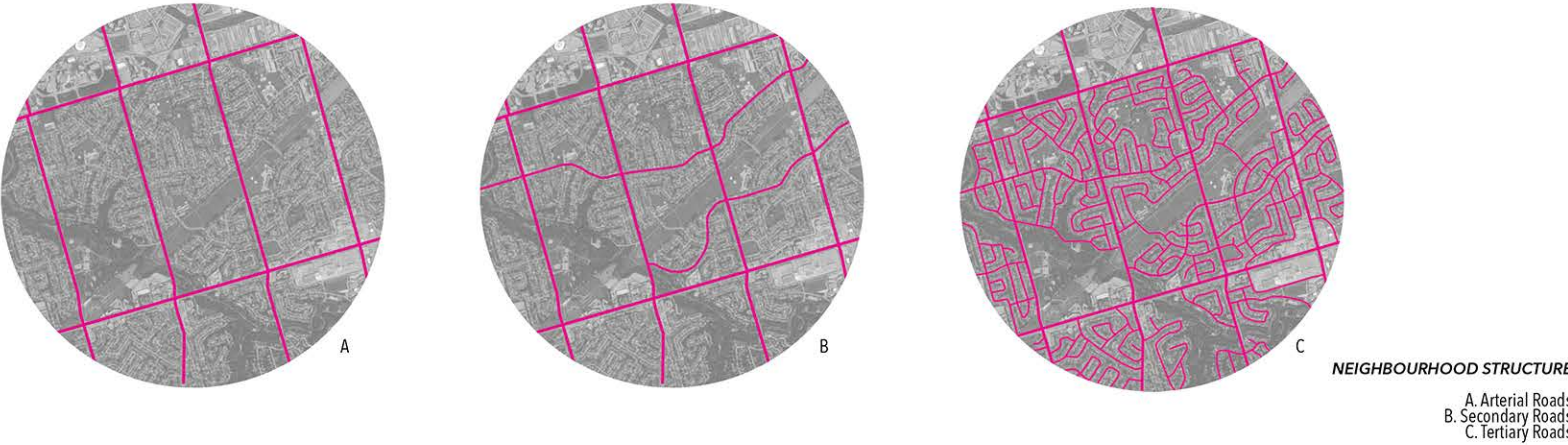
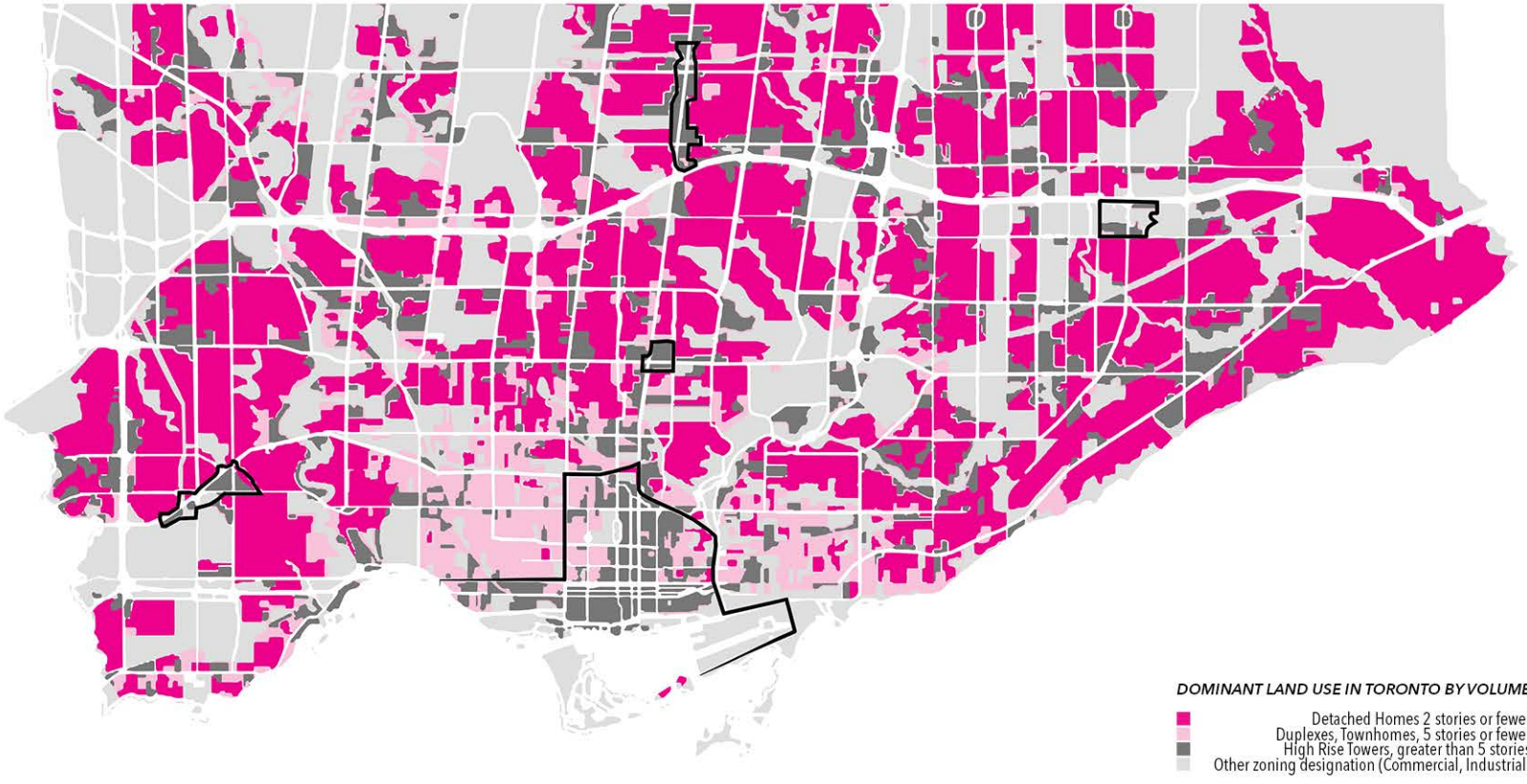
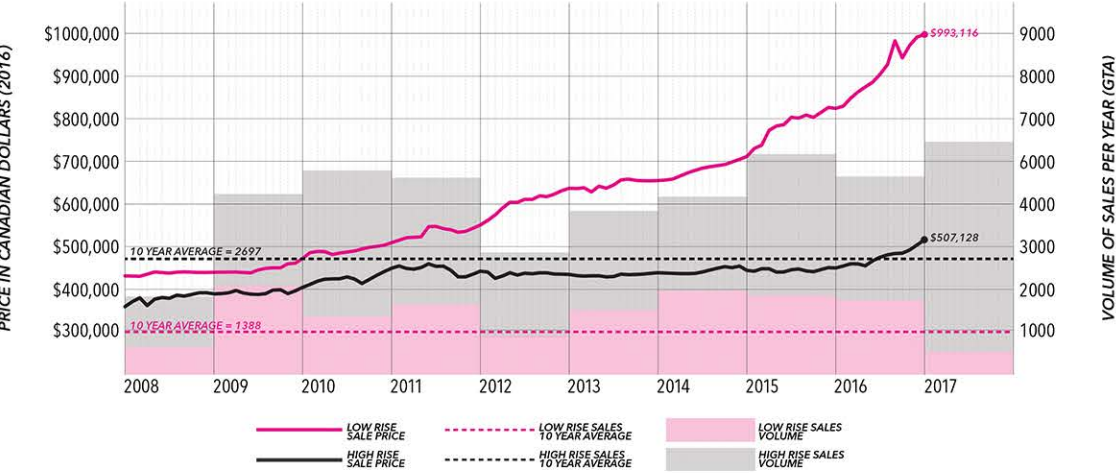
Much of the high rise development is done in Toronto's five urban growth centers - Downtown/Waterfront, Scarborough Center, North York Center, Etobicoke Center, and Yonge Eglinton Center - as designated by the City of Toronto's Official Plan, which aims for densification and intensification where there is existing infrastructure in place. These urban growth centers share the characteristics of access to transit, established commercial activities, and tall towers. In some of these regions, the high density zones have immediate adjacencies to RD zoned low density residential designations, that are typically suburban.

In the case of the Scarborough Center Growth region, the Official Plan designated growth center's southern boundary terminates at the major arterial street Ellesmere. The north side of this boundary is highly intensive; it is home to the Scarborough Civic Center, a major shopping mall, an inter-city bus hub, the most trafficked local transit station on the Scarborough rapid transit line, access to the 401 highway, and multiple high rise towers. Contrasting this development on the south side of this boundary is the community of Bendale. The neighbourhood consists of one public school, several strip malls, a ravine system, and many suburban houses.

In its current state, the community of Bendale could not be more different than its northern neighbour. Residents will own a vehicle for transportation, will have their own private green space, and will have their own land property. Because of the availability of space, and the clear delineation of ownership with regards to house and land, and vernacular industry standard construction practices, suburban homes are candidates for appropriation.

Appropriation in the single family detached home is not a new phenomenon; many houses in Bendale have had additions to their exteriors, and many more are likely to have renovations to their interiors. A homeowner who needs more living space could historically move house to a new location in the city - typically further from amenities - or change their existing space. With the increase in the cost to purchase a home, the first option of moving is becoming less and less attractive. However, renovations could add living space and value to their home, while retaining access to all the established infrastructures that are nearby.

Although appropriation exists, and is happening in the neighbourhood, much of it does not fully take advantage of the ability to add density, and value to the houses. RD Appropriation attempts to create a ruleset that would serve as a guideline for intensification to take advantage of the social and economic realities of Toronto's real estate market. A typological approach is taken, to propose different preferred appropriation solutions based on the lot type, while at the same time recognizing that ownership of each lot is by an individual. Because of this, RD Appropriation does not aim to impose or prescribe a single solution for the development of the neighbourhood, but attempts to show the possibilities of what can be done to develop the suburbs into a sustainable and efficient system.



TYPICAL SUBURBAN NEIGHBOURHOOD
1:2000

Neighbourhoods in Scarborough suburbs have typical commonalities. Each neighbourhood unit is delineated by four arterial streets, that form the major street grid. Inside each space of the grid, the road planning, locations of transit stops, house styles, and commercial activities are largely similar. Because of this, it is possible to approach densification typologically to prepare a system for all typical neighbourhoods.



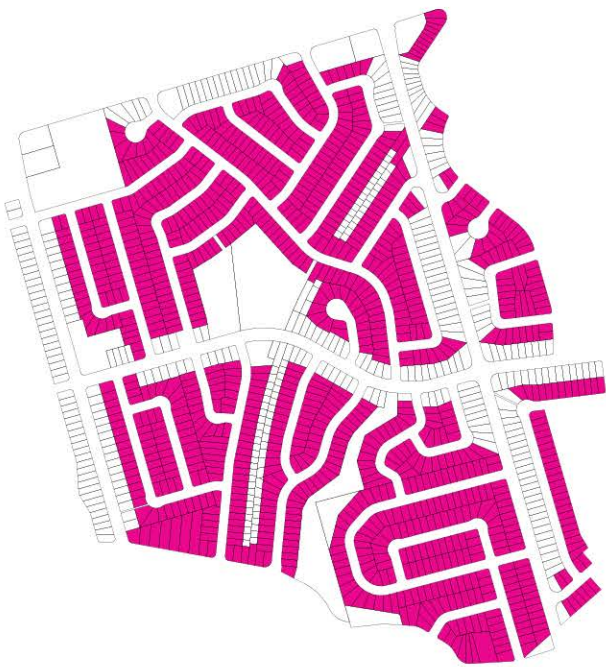
REVERSE LOT ARTERIAL ROADS

These lots front on tertiary roads and back onto major arterial roads. Existing lots typically have 45 meter (145 foot) lot depths with 14 meter (45 foot) frontages. Although existing access is primarily through the tertiary road on which the lot faces, some homeowners have begun to construct gates along the rear of the lots to allow for pedestrian access.



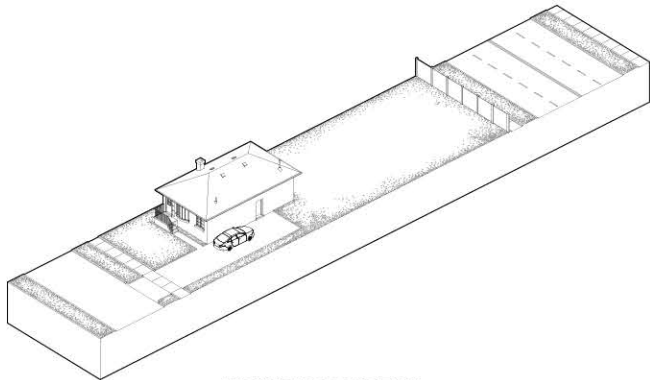
SECONDARY ROAD

Lots fronting onto a secondary road typically have lot frontages that between 14 meters and 16 meters (46 and 52 feet). Existing lots are not as deep as reverse arterial lots or tertiary lots. Secondary roads may have overhead utilities flanking the roadway. The road itself may have on-street parking as well as dedicated bicycle lanes and may have dedicated pedestrian crosswalks.

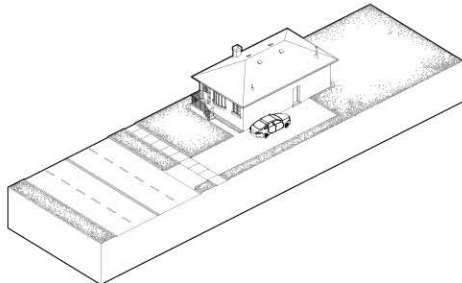


TERTIARY ROADS

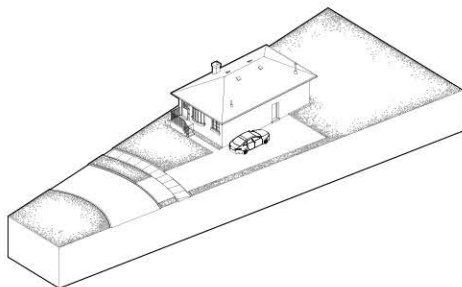
These lots comprise the majority of the neighbourhood land use. Lots typically have frontages of 14m (45 feet). Lot shapes and proportions vary along the curve of a road leading to non-orthogonal, pie shaped lot types. Vehicular traffic along these roads is usually slow, with the roadway sometimes doubling as parking, or for recreational activities.



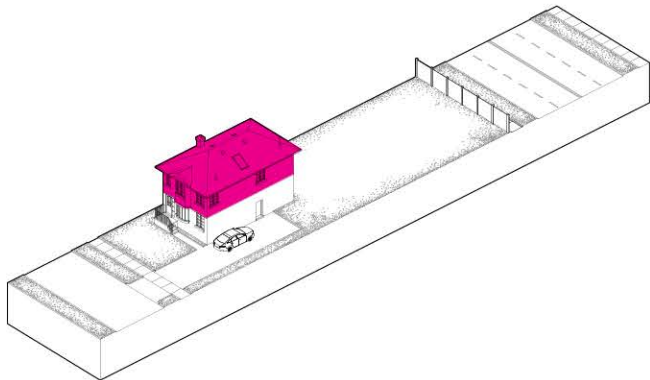
EXISTING LOT CONDITION



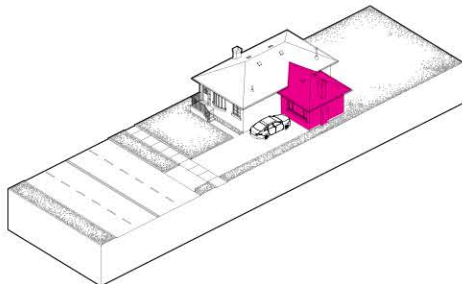
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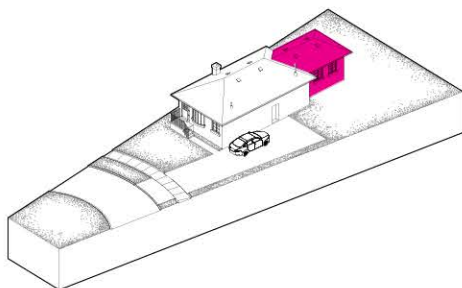
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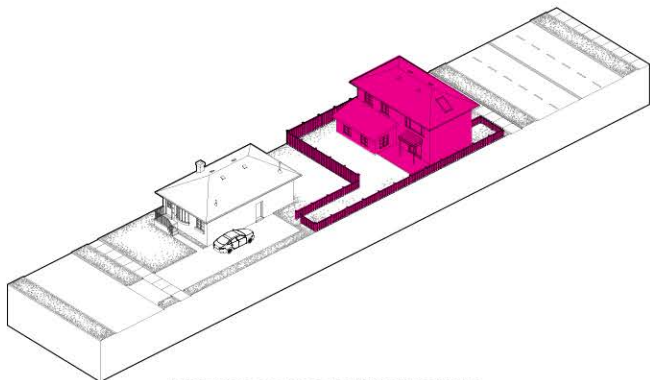
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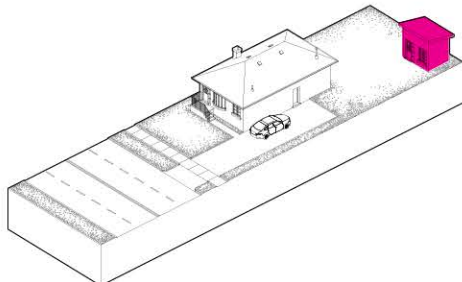
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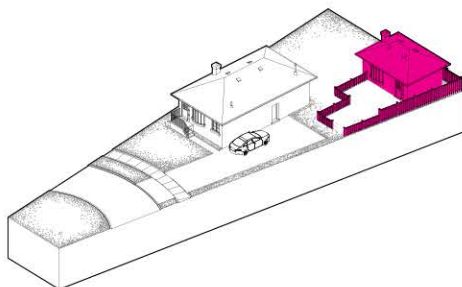
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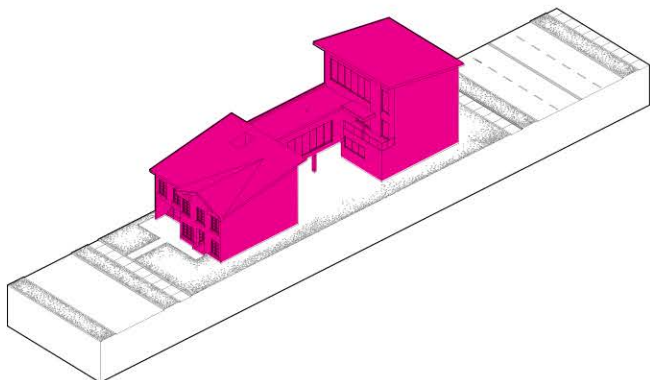
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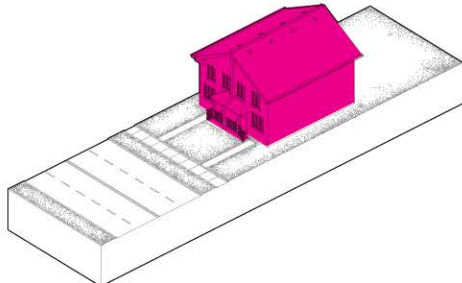
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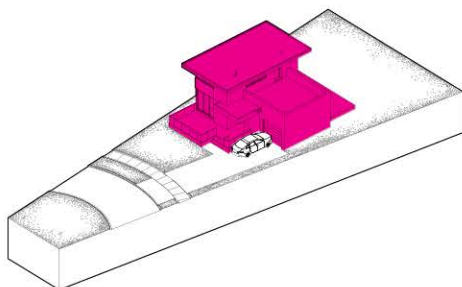
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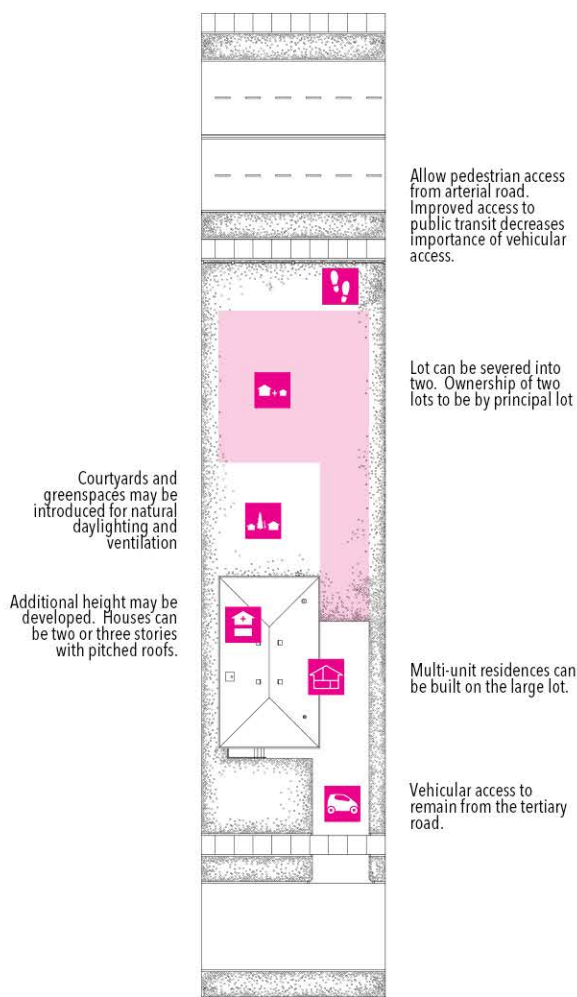
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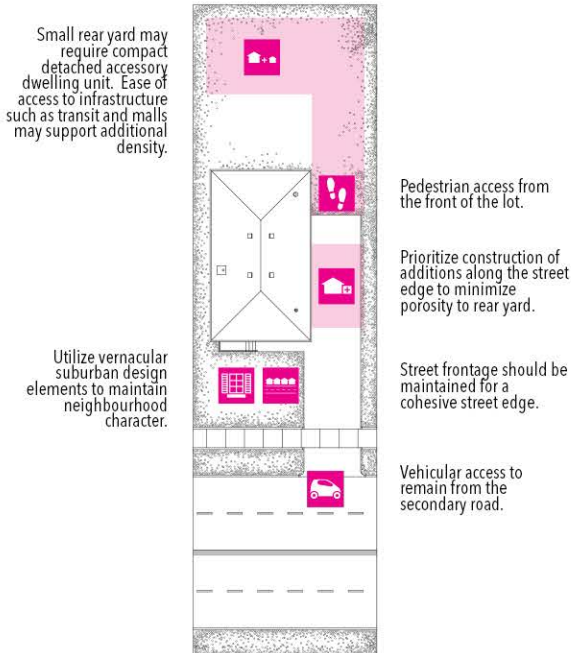
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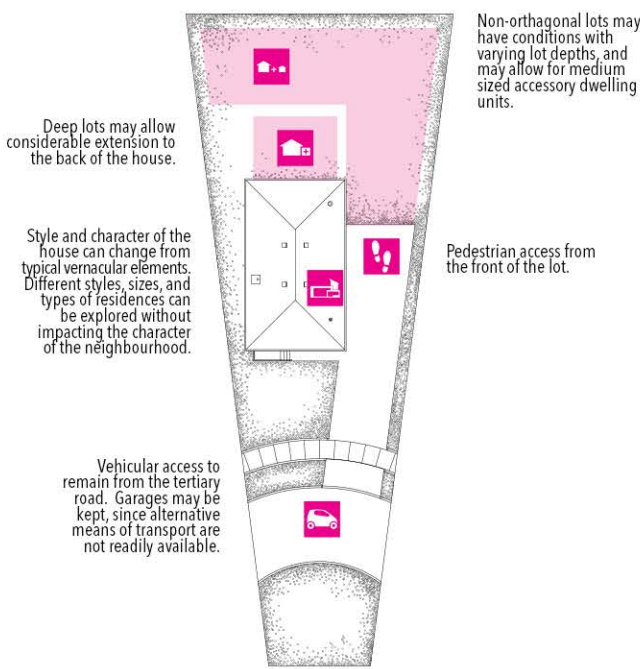
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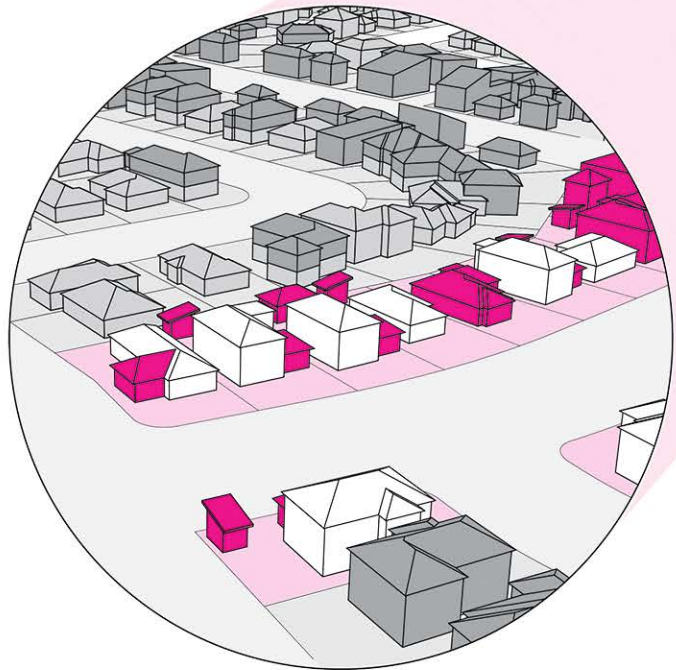
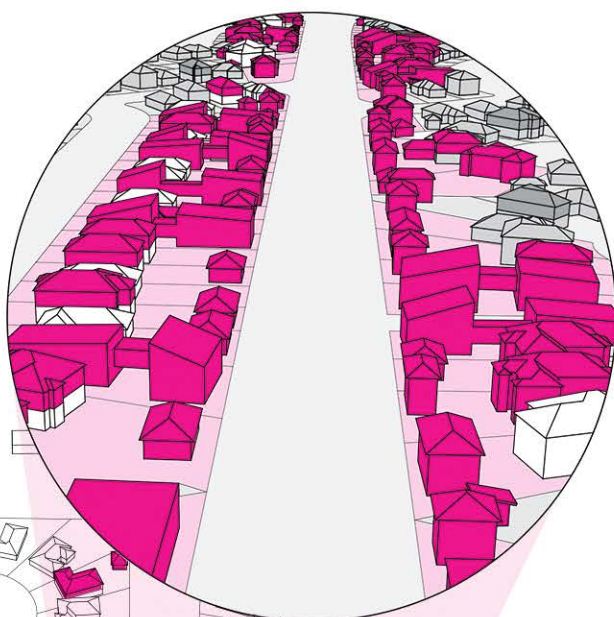
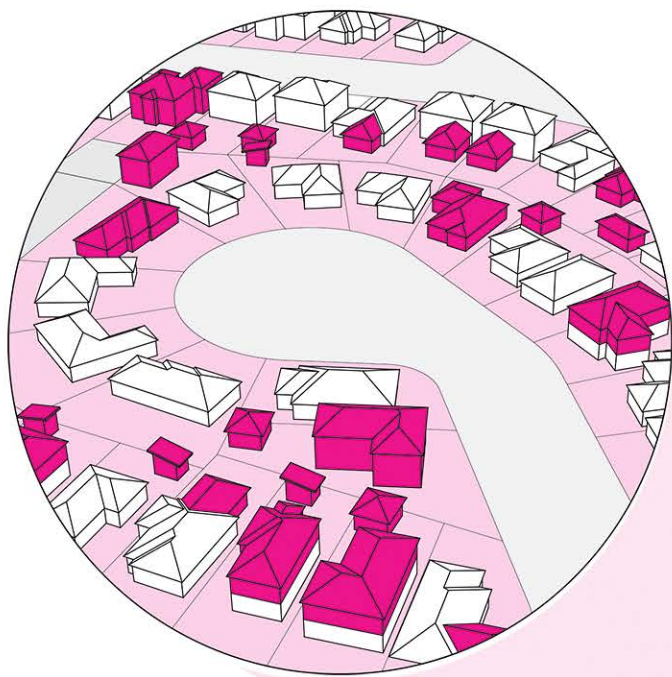
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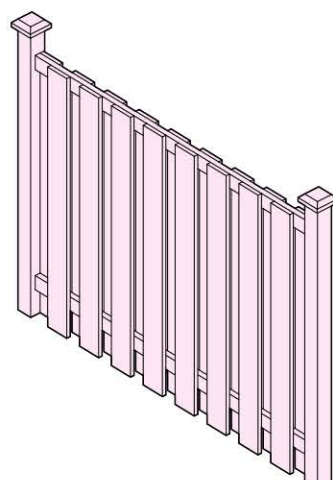
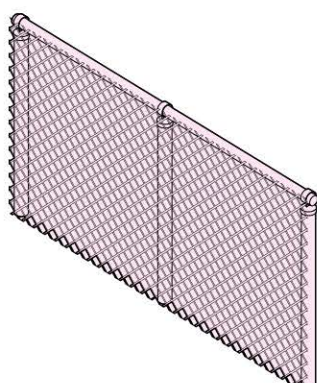
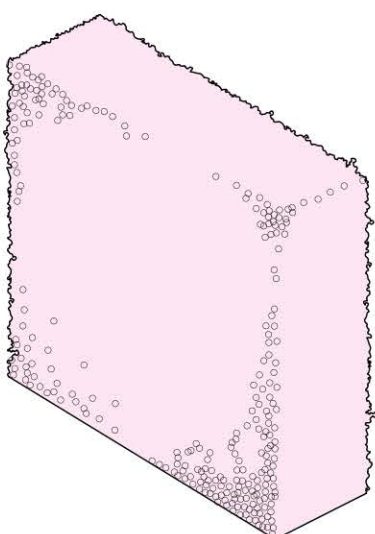
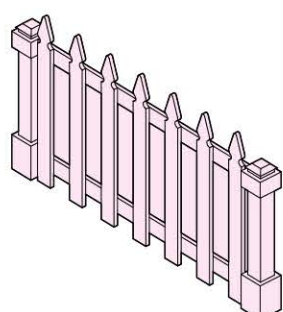
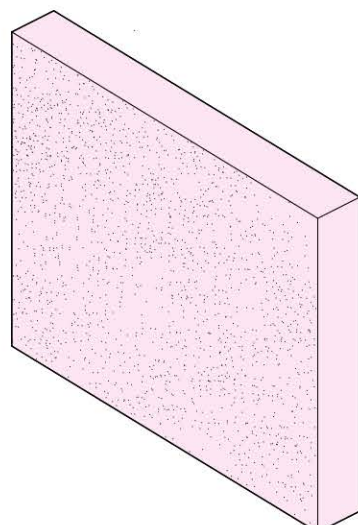
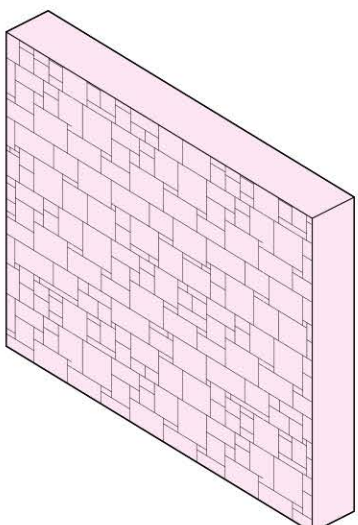
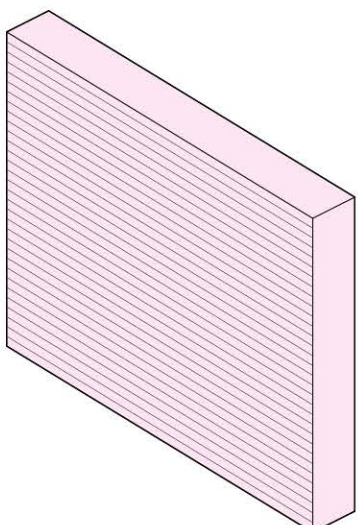
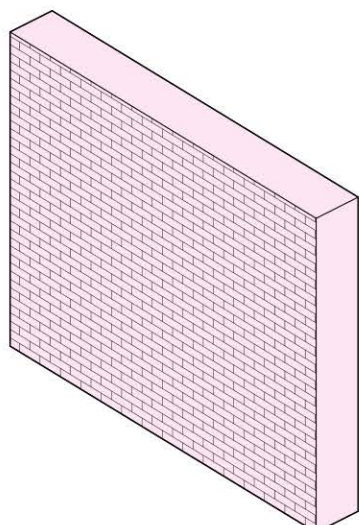
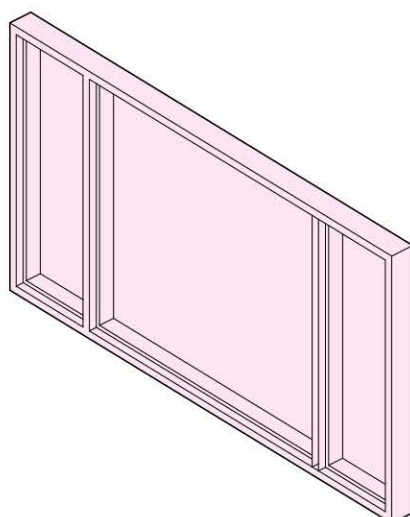
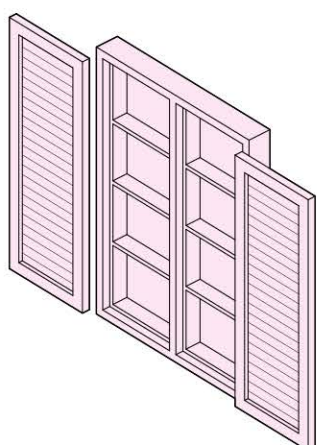
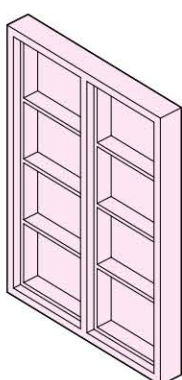
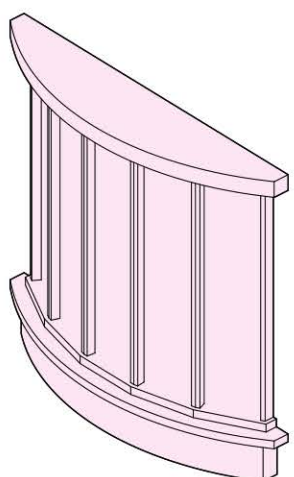
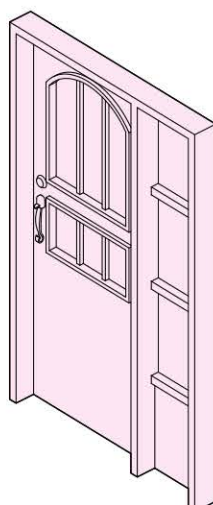
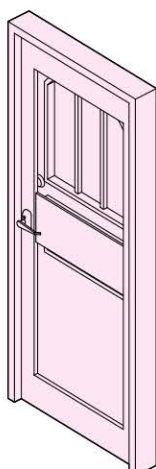
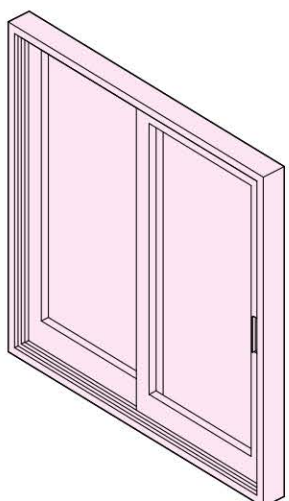
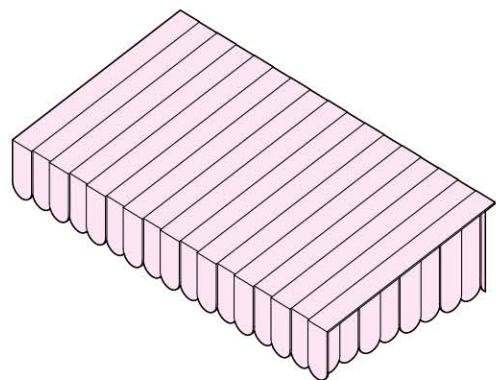
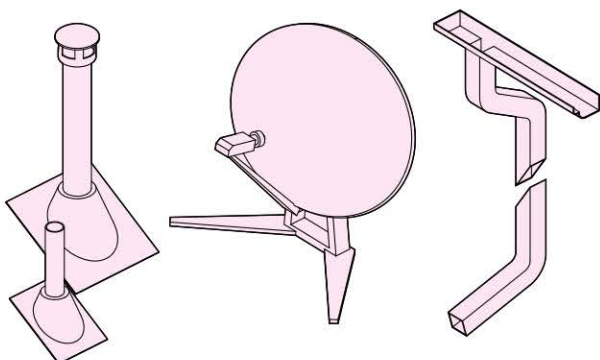
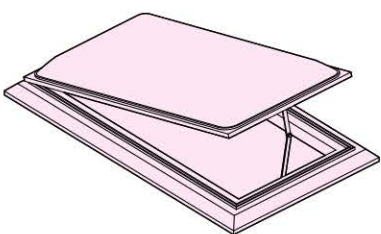
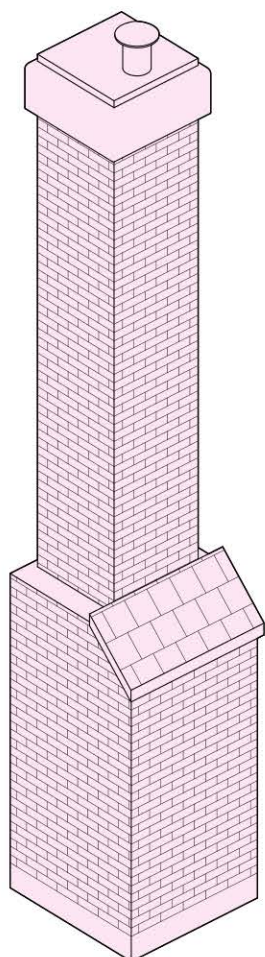


RULE SET



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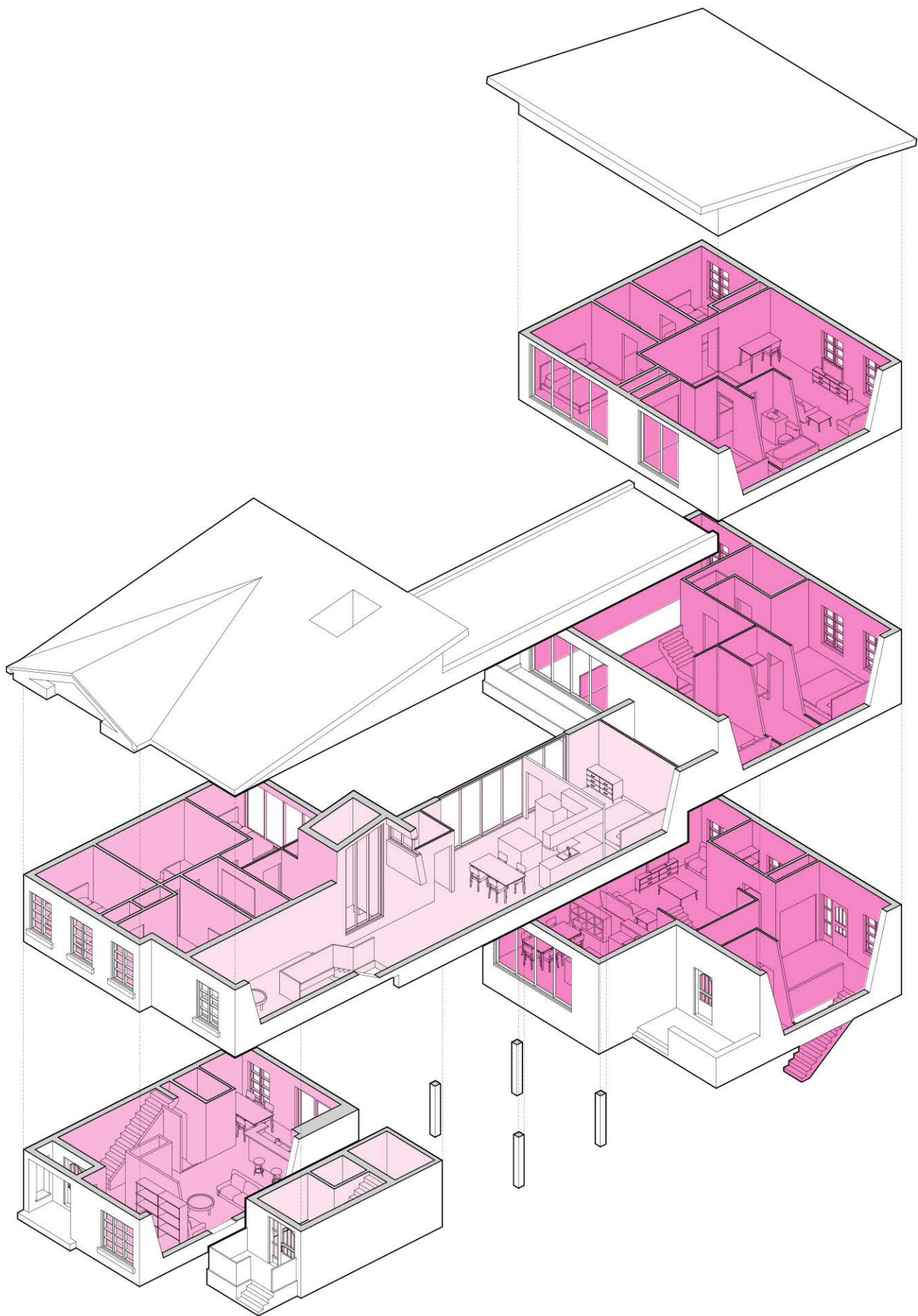
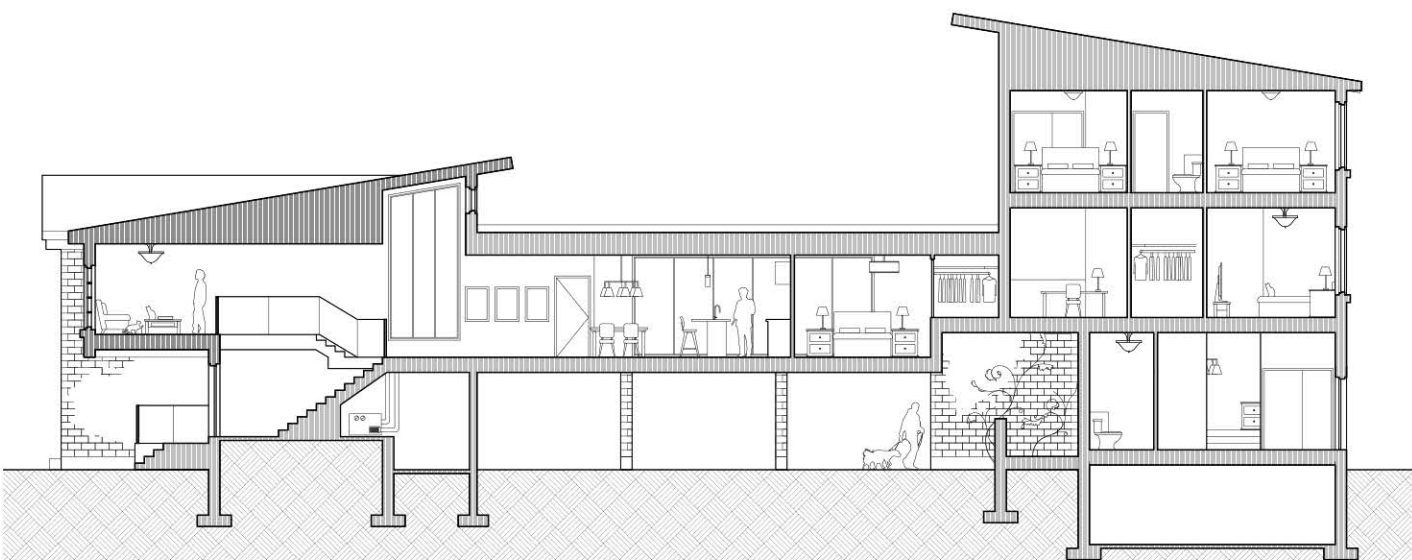
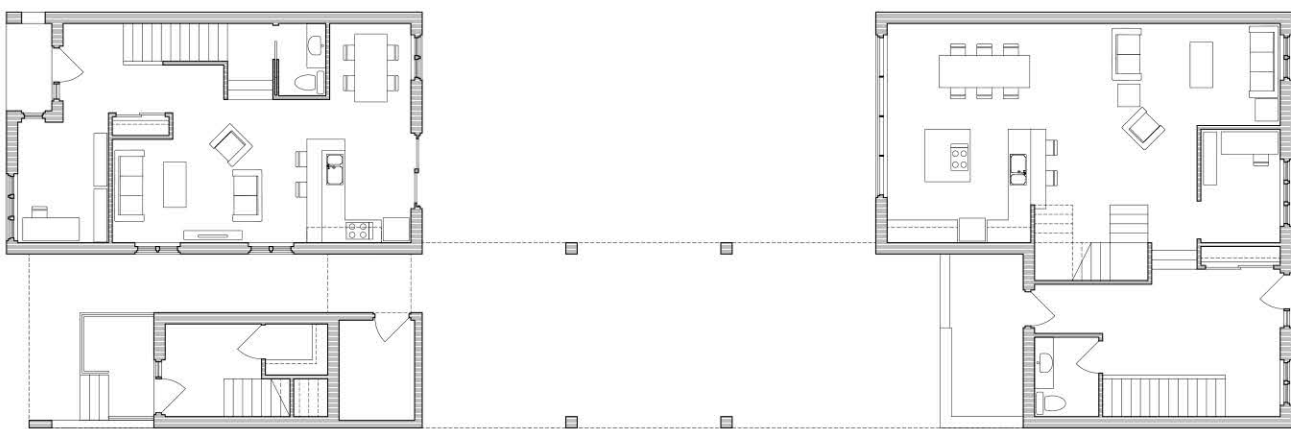
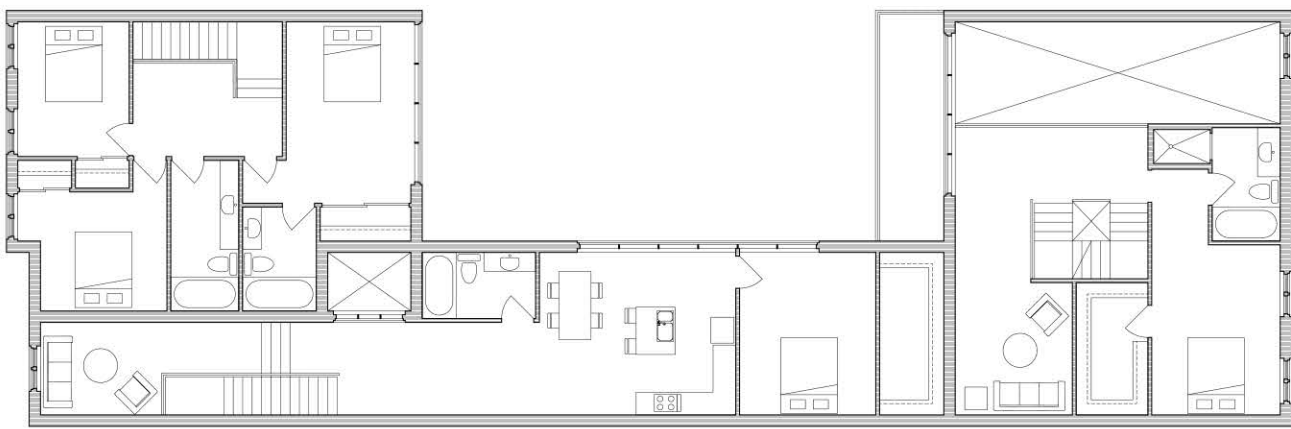
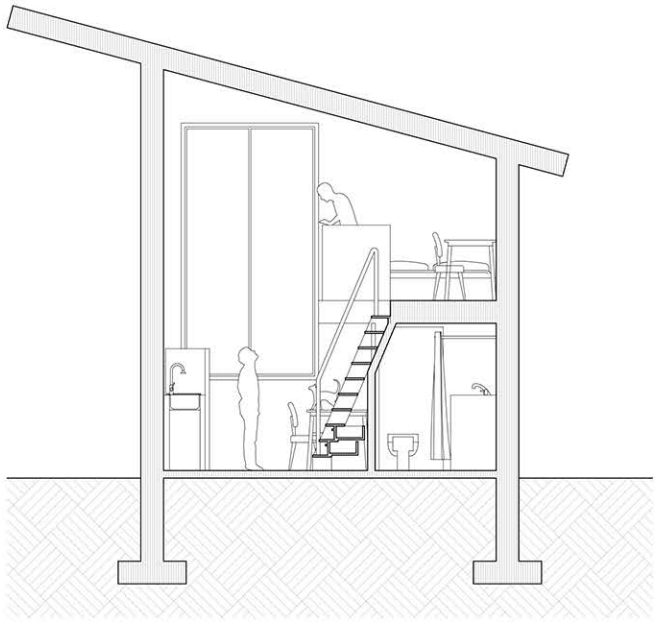
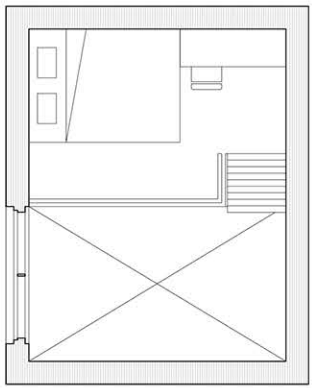
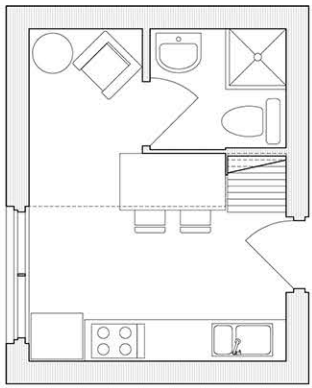
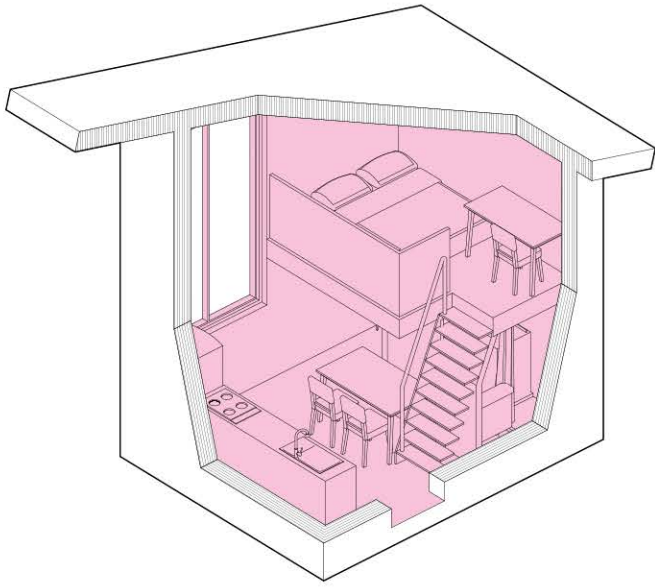




SECONDARY LOT - DETACHED ACCESSORY DWELLING UNIT PROTOTYPE

This compact building attempts to offer the choice of a detached home to all lot types since detached dwellings remain a highly desired housing type in Toronto's current economic and cultural climate.

Occupying a small footprint of 4 by 5 meters, this house provides all the basic amenities that would be required. This prototype attempts to be quickly and easily constructible by using industry standard lumber dimensions, short spans, and simplistic shed roof designs.



REVERSE LOT - NEW CONSTRUCTION PROTOTYPE

New construction on the reverse lot attempts to introduce multi-unit residential dwellings onto the spacious site. Each unit is independent of one another, sharing only the green space in the courtyard.

The courtyard is introduced in the middle of the building in order to provide a well for sunlighting and natural ventilation. A breezeway is introduced from the tertiary road to the courtyard, providing a covered, semi-private space for communal use.

Because of the close proximity between units, floor plates are staggered to minimize direct sight lines between units. Sound privacy is maintained through the minimal shared party walls and party floors. Where party walls do exist, service spaces such as closets are used for additional sound buffer.