

Reclaiming the Ruelle:
Creating a Methodology for Architectural Interventions in the
Laneways of Montreal's Plateau-Mont-Royal

by

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ABSTRACT

Montréal's Plateau Mont-Royal is attractive neighbourhood to live, as it is a thriving urban environment. It offers residents essential services like shops, banks, medical establishments, and access to the public transit network. It is also one of the most densely populated neighbourhood in Canada.

There are spaces nested within the Plateau's tightly woven fabric that can be harvested to develop a new type of urban condition. The ruelle (or laneway) are underused spaces that could offer a different perspective of the neighbourhood if their quality was improved. The ruelle can act as an armature for a small architectural intervention that could establish it as a new type of urban street.

By developing a methodology based on the existing characteristics of the surrounding neighbourhood, the 82 kilometres of ruelles throughout the Plateau can be developed into more vibrant urban spaces.

ACKNOWLEDGMENTS

I'd like to thank my friends and family who have supported throughout my architectural journey over the past six years. It been a long ride, but well worth it.

This thesis is the reflection of a desire to better know the place where my family is from: Montréal. I've always felt a deep connection to this place, and am proud to have had the opportunity to incorporate it into my academic and architectural career.

Thank you to all people who had a direct impact on my thesis experience. Duncan Patterson, Breagh McKeough, Izak Bridgeman, Alice Fudge, and Imtiaz Ashraf thanks for listening to my crazy ideas, helping me form them into design moves, and cheering me on along the way. To my mother Carole Lulham: thanks for always keeps me inspired and levelheaded. Thanks to my loving husband and partner in crime, Steve Weaver Crawford who put up with my thesis-related meltdowns and kept my well being in check, all while helping me keep the big picture in focus.

Thanks to my aunt, Bev Carrick who took me along with her to Sierra Leone in 2014 so that I could study multi-generational housing for the Rosetti scholarship, and to Peter Henry who helped me form my Rosetti experience.

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CHAPTER 1: INTRODUCTION

Montréal's Plateau Mont-Royal is one of Canada's most densely populated, vibrant neighbourhoods. It is one of the cultural hotspots in the city, offering shops, new restaurants, festivals and galleries for residents (Figure 1 and 2). It is a great example of how many people live close together, and interact with one another in public spaces, coffee shops, bistros and on the streets. It is well connected to transit, and has several bike paths to navigate through the neighbourhood. Within the fabric of this area, there is under-used spaces that can serve as an armature for the further development: the ruelle, or laneway.

The Plateau consists of over 400 blocks, and the majority have a ruelle, which translates to over 82 kilometres of ruelles throughout this neighbourhood. This means that there is currently over 80 kilometres of under-used space that could be transformed into something more vibrant. (Figure 3 and 4). There is a desire among residents of the Plateau to better the lanes behind their homes. The Ruelle Verte initiative pairs community members with municipal funds to create green spaces in the lanes.

There are already several types of streets in the plateau the main street. The rue/ ruelle, which was initially a lane that has over time become a municipal street, the ruelle typique, the inhabited ruelle verte, and the path. This is a proposal for a new type: the little street. It acts as a smaller, quieter, less formal street. It is tucked away from the larger streets, while still being in a desirable community.



Figure 1: Cafe Olympico, on Bernard Street

Figure 2: Rue Saint-Denis at night (Tourism Montreal 2015)

Occupied laneways is not a new urban concept; cities throughout the world have proven that living 'little' on the lane is possible. Vancouver, Seattle, Melbourne all boast several examples of laneway typologies. Toronto has recently launched a set of design criteria which describes to interested parties how the lane can be successfully used for housing. Montréal is different than these examples. What it offers is a tighter, stricter set of parameters, which translates to smaller architectural interventions, and more reliance on the surrounding community.

Non-western cultures throughout the world have managed to maintain the notion of living in small primary dwellings and relying on the surrounding community as a support network. Sierra Leoneans in West Africa rely heavily on their surrounding environments for daily needs. So much so, that this community network is considered part of their home.

The concept of living in a small primary dwelling, and relying on the surrounding community and urban context can be and has been applied in a North-American context. The tiny house movement has become popular in the past decade, and is convincing people to live in smaller homes. Architects have been designing small more human scale buildings



Figure 3: Lane near Mont-Royal avenue (Ruelle MR) in the Plateau, 2014

Figure 4: Lane on rue Gilford, photograph by Alannah Heffez (Spacing Montreal 2010)

since the Renaissance. Le Corbusier designed and lived in a 3 x 3 meter cottage during the later part of his life.

To ensure the vibrancy of the surrounding neighbourhood is maintained in the ruelles, a thorough analysis of the existing urban conditions is paramount. The typical block of the Plateau can be divided up into a series of programmatic zones. These zones become a hierarchy of how the elements of the Plateau are assembled. Starting with the street, there is a street parking zone, and sidewalk which are elements of the public realm. From there, front yards and front projections such as stairs, balconies and porches protrude from the housing stock. These projections are character defining elements in the Plateau, and they are often where individuals place personal touches. Moving inwards is the row house, back projections and backyards. The row house is the main type of dwelling in the Plateau, consisting of two and three storey attached buildings. Back projections are similar to front projections, but less formal, as they face the lane. Most of these zones can be identified in any of the 400+ residential blocks in the Plateau.

Based on these zones, a system for how to create a vibrant place in the lanes can be designed. These new zones take their shape from the character exuded from existing zones. They act as a guide for how to implement architectural interventions on a smaller scale on the ruelle.

This thesis aims to find a method to transform the ruelles from a through fare into a place by improving the quality of the space. There is an opportunity to create something better than what it currently is, to match the vitality present throughout the rest of this iconic neighbourhood. By taking clues from the surrounding fabric, and designing a method that can be applied to any of the laneways throughout the Plateau, the ruelle can become a vibrant part of the neighbourhood.

Thesis Question

How can the introduction of a new architectural methodology become a way to develop the underused spaces in a thriving urban context?

CHAPTER 2: FINDINGS

Montreal's Plateau Mont-Royal

The Plateau Mont-Royal is one of Canada's most dense urban neighbourhoods. Montréal boasts density of 4500 people/km², whereas the Plateau's density is 12,000/km². As such there are many amenities, services and attractions that keep people moving to this neighbourhood. It offers its residents some of the city's best restaurants, public parks and plazas, many art galleries, and top shops. It is home to three stops on the city's metro transportation line, it is along major bus routes, and has many public bike share points. All of these elements fit into an 8km² area. To visually represent the available amenities, a study was done to determine all the amenities in a 1km radius or an 8-minute walk. Several types of vital amenities were examined including grocery stores, schools, laundromat, public bike share points, bicycle lanes, gyms, yoga studios and coffee shops. The study showed what Plateau residents already know, that their neighbourhood offers them most aspects needed in daily life within a short walk. (See appendix for study).

The housing stock in the Plateau is comprised mostly of attached row houses, though there are a small number of taller apartment buildings and cottages. There are three typologies of attached row houses that are prominent in the area: the maisonette, the

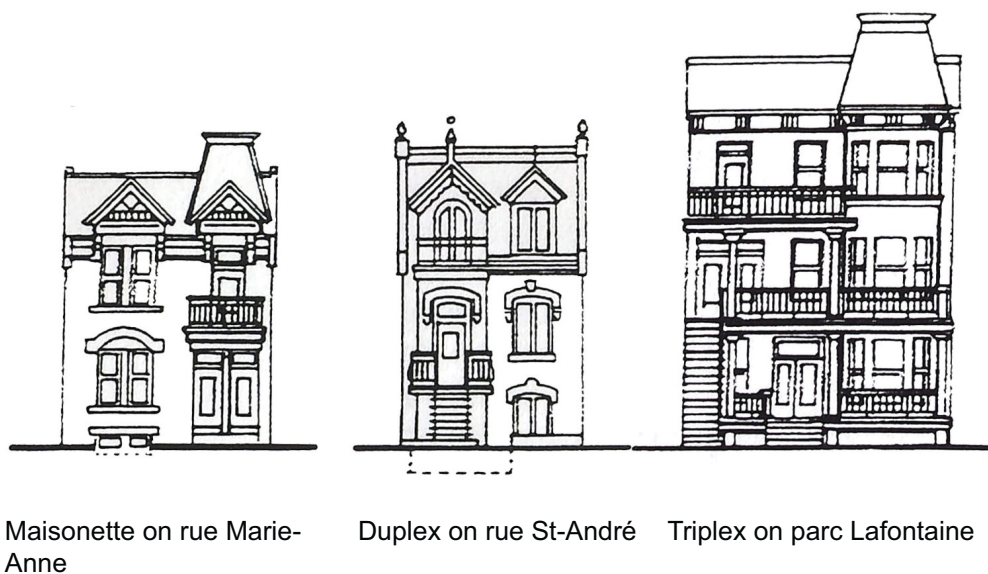


Figure 5: Typical Plateau maisonette (de la Riva 2000)

Figure 6: Typical Plateau duplex (de la Riva 2000)

Figure 7: Typical Plateau triplex (de la Riva 2000)

Le Plateau-Mont-Royal

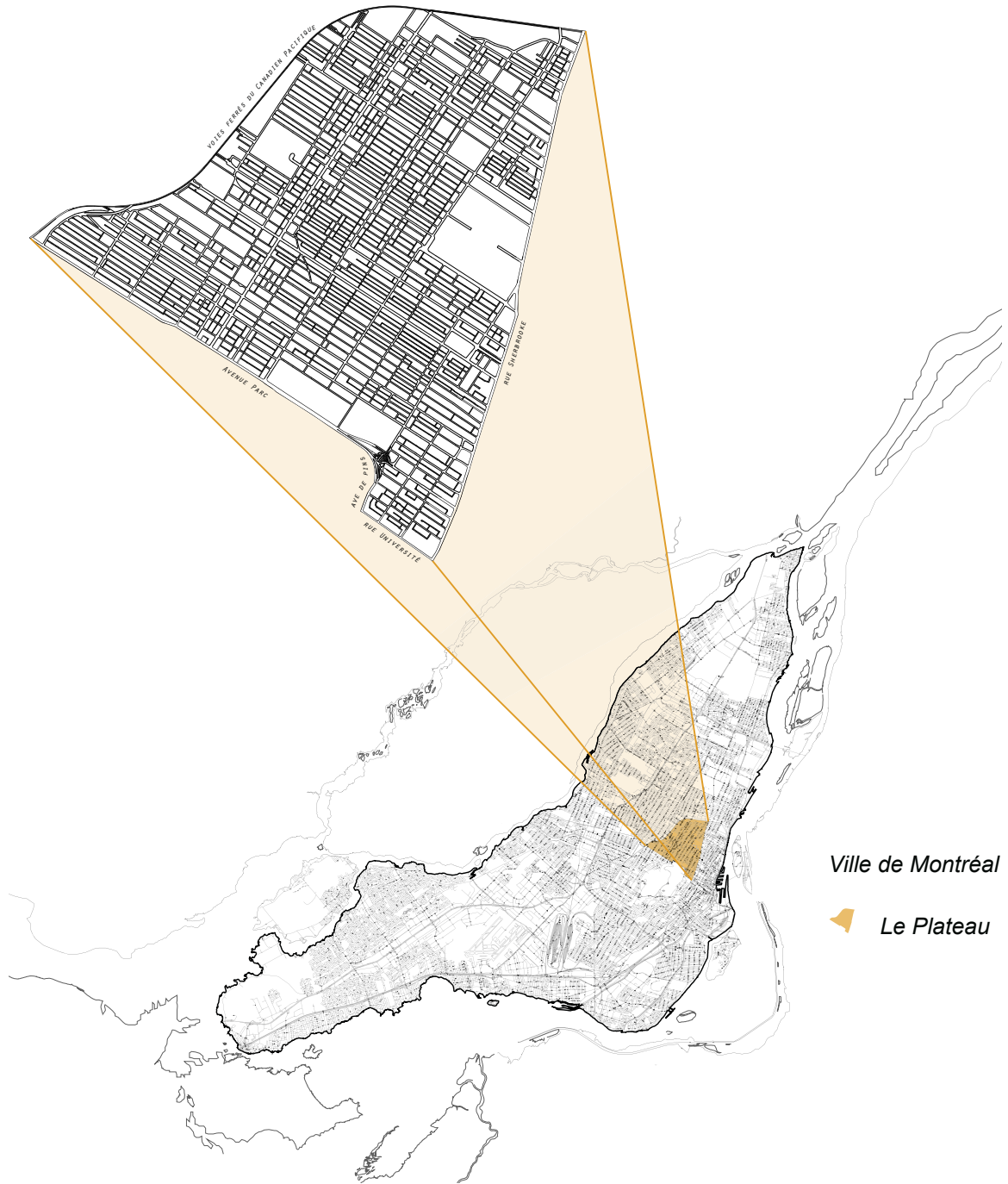


Figure 8: Contextual site plan of the Plateau within the Island of Montreal

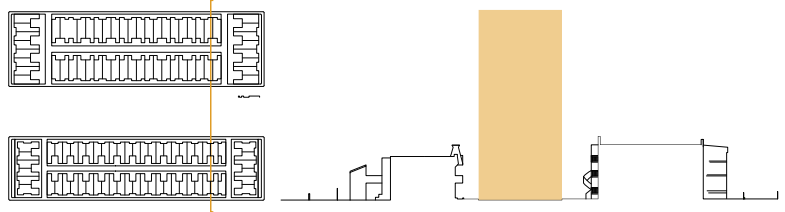
duplex and the triplex.

The Maisonnette is typically one unit over three levels sometimes with a second unit in a half-basement. (Figure 5) The duplex is a two-storey townhouse, with one unit per floor. (Figure 6) Typically, units are small and square in plan. The triplex commonly has one unit per level, over three stories. (Figure 7) Units are traditionally long, and L-shaped in plan. This 'L' is usually mirrored by an adjoining triplex to create a courtyard in the backyard.

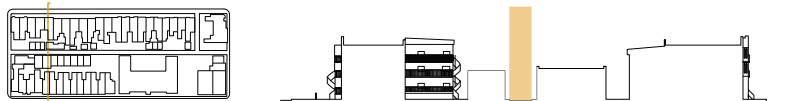
The Plateau is made up of a network of six street types: The commercial strip, the residential street, the rue/ruelle, the ruelle verte, the ruelle typique, and the path, all of which have unique qualities. (Figure 9) They range from large open circulation arteries to small pedestrian paths.

All of these street types, amenities, and services come together to create this infamous 8km² neighbourhood that is bordered to the north and east by the Canadian Pacific Railroad tracks, to the west by Mount Royal, and to the south Sherbrooke street.

Street



Rue // Ruelle



Typical Ruelle

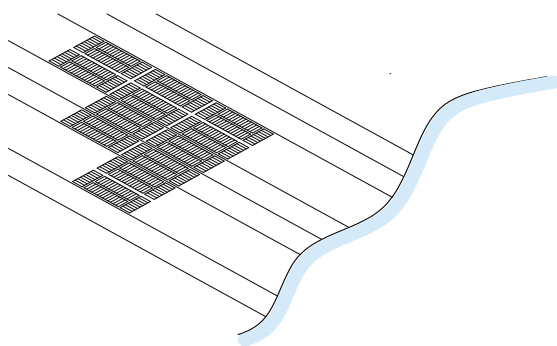


Figure 9: Examples of Plateau street types

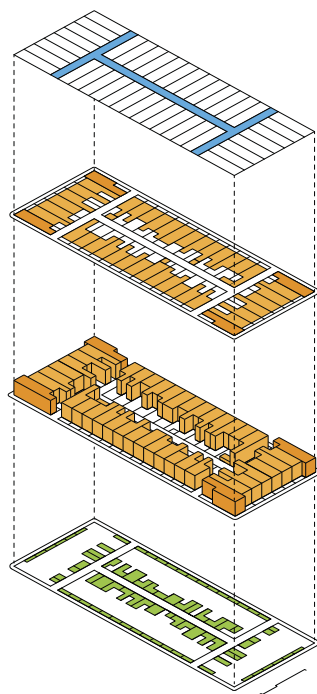
Laneways as a Site

Out of sight, out of mind, the American residential alley has been the academic, geographic and social outcast of the built environment for at least a half-century. (Clay 1979, 7)

In order to determine whether inhabiting the laneway is a viable option in the context of the Plateau Mont-Royal, a brief look into its history is required. The original Montréal subdivision of lots was structured based on the extension of agricultural rows running north from the Saint-Laurent River. The typical Montréal block is made up of two longitudinal lanes and two cross lanes, forming an 'H'. Buildings on the traditional residential block cover approximately 60% of available land. Row houses are set back from the street except for the approach nose at each of the four corners. The massing of the row homes



Residential blocks were originally parcelled according to agricultural rows



Laneways in a typical Plateau residential block

Head-of-block at each corner

Massing of typical row houses in the Plateau

Front and back yards are a threshold between public and private

Figure 10: Historical laneway context

consists of maisonnettes, duplexes, and triplexes. Front and back yards create a threshold between housing and the city. (Figure 10)

From their onset, the ruelle was home to coal sheds, coach houses and laundry lines. (Figure 11) With the inception of the baby boom generation in the late 1940s, the ruelle became a makeshift playground, which made up for the lack of formal municipal playgrounds at the time. It was also a place for neighbours to catch up and have informal conversations. In the 1960s many lanes were paved, and they lost the park-like quality they had a decade before. Within the next two decades, the ruelles became derelict, rundown and were seen by the public as unsafe public space. In the late 1980s, Mayor Jean Drapeau initiated campaigns to revitalize the ruelles: *place au soleil*, and *tournesol*, which aimed to combat laneway related problems such as garbage disposal, water retention, asphalt and security concerns. The result was more than 35,000 fire-hazardous coal sheds being removed from city lanes, and they became more open spaces.

More recently, a collaboration between the city and community members to 'green' alleyways called Ruelle Vertes was started. The Ruelle Verte program helps fund improvements to laneways, in order to foster a sense of community, while reducing heat island effect and increasing biodiversity in the city. There are currently over 30 Ruelle Vertes throughout the Plateau.

Inhabited laneways in urban cores are not uncommon. Great examples of lanescapes can be found in Melbourne, the Netherlands, Vancouver, Toronto, and Calgary. Melbourne's lanes are a true symbol of the city's urban identity. They are commercial in nature, and are found between some of the busiest downtown streets. They are narrow, and typically home to restaurants, shops and galleries. At some points, they become arcades, and

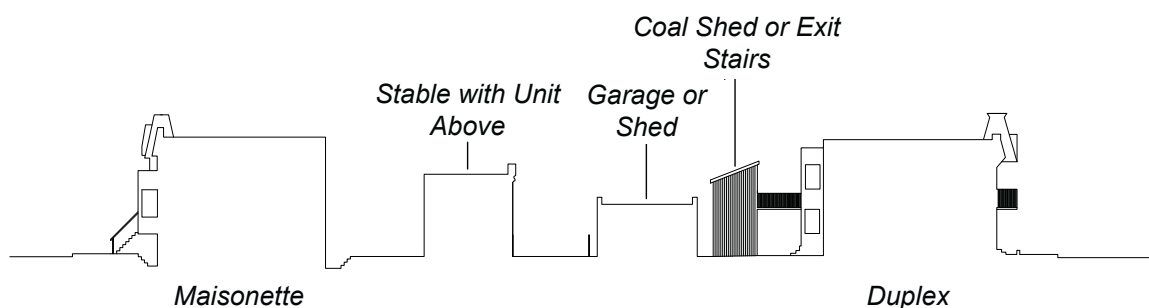


Figure 11: Historic section through laneway showing coal shed, garage and coach house

navigate through buildings. This interior public space becomes a place for people to take cover in the rain or from the hot sun. (Figure 12)

The Dutch have developed a way to give the street back to the people: the Woonerf. Literally translated to 'Living Street', these Woonerfs take the emphasis off the car, and focus on creating human-friendly spaces. They have no sidewalks, markings, curbs or crossing signs, and are typically paved in brick signifying pedestrian zone. Vehicular traffic is unsure where they belong in this context; they slow down and become more alert. Examples of Woonerf design can be found throughout the Plateau. Avenue Duluth and avenue Fairmount are both examples of using neck downs as a way to calm traffic. These neck downs are protrusions of the sidewalk into the vehicular realm, and can be planted with trees and plants, or become a wider sidewalk. (Figure 13). Although the Woonerf concept was not designed specifically for laneways, it's design inspired how laneways world-wide can be re-interpreted.

Canadian Laneways as found in Vancouver, Toronto, and more recently Calgary all have their own parameters. A study was done to compare the various urban laneways in order to establish if the Plateau's laneways can adopt similar design strategies. Vancouver is the only Canadian city to formally adopt by-laws that allow laneway houses. Calgary and Toronto also have laneway conditions that are 5 to 7 meters wide. All three Canadian examples that were studied show lanes that are wider, and existing lots that are both wider and longer compared to the Plateau. With the exception of Vancouver, these Canadian examples of laneway houses are architect-designed one-offs, and therefore not necessarily accessible for all levels of income. There are initiatives, but more work needs to be done in order to let this housing typology thrive in Canada. (See appendix for study)



Figure 12: Melbourne's Monaghan Lane in the CBD (City of Melbourne, 2015)

Figure 13: Woonerf in Delft, the Netherlands (Mobycon 2014)

Figure 14: Croft Street Laneway house in Toronto (Kohn Shnier Architects 2015)

Learning from Sierra Leone

I traveled to Sierra Leone to study typical family dwellings at three scales: the city (Freetown), the town (Kabala), and the village (Affia). The primary aim was to learn how people live with their families and to consider whether this could be applicable in a North American context.

What was discovered is that although the built form of the dwelling differs according to their context (city, town, or village), there is a common thread. The centre of family life is not the physical dwelling; instead, “home” is the network of people, places, and institutions on which people rely for daily life. To an outsider, it appears that most families live in tight quarters, but this is functional because the house is used predominantly for sleeping and food storage. The true concept of “home” extends to a network that can include multiple wives/mothers, extended families, adopted siblings, elders from the community, neighbours, and many more informal relations. This conceptual home flows outside to occupy front porches, balconies, front and back yards, outdoor kitchens, query huts, schools, mosques, churches, markets, and spaces in between, forming a dwelling much larger than the physical structure of the house. (Figure 15 and 16)

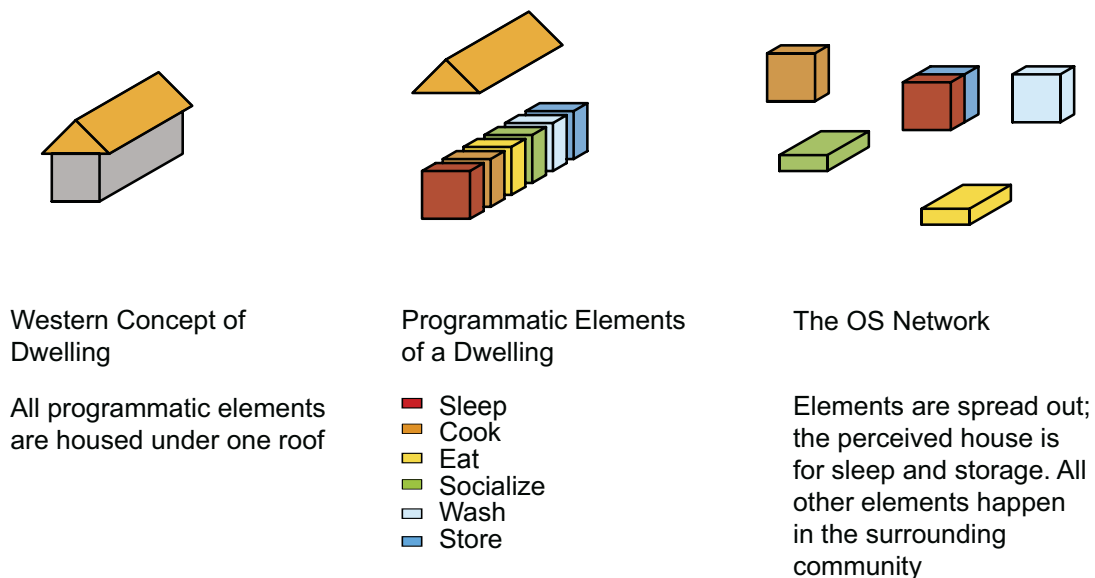


Figure 15: Conceptual dwelling diagram

With young adults and seniors seeking an alternative to the expensive inner city real-estate, urban modes of dwelling needs to be re-interpreted. Establishing a home network as exists in Sierra Leone could be a new framework for how families live together and interact with each other and the larger community.

Using this 'OS' method, if an individual lived in a small inner-city dwelling in Montreal, they would consider nearby restaurants their kitchen. Parks, cinemas and bars would be their living room, and the laundromat around the corner would be their laundry room, and so on. By fulfilling daily needs using the neighbourhood as a base, the home can be seen more as a place to sleep and relax at the end of the day.

Kabala Legend

1. Perceived dwelling
2. Kitchen
3. Ruins
- 4-5. Neighbour's house
6. School
7. Market
8. Town centre
9. Education centre
10. Sports field
11. Mosque
12. Church

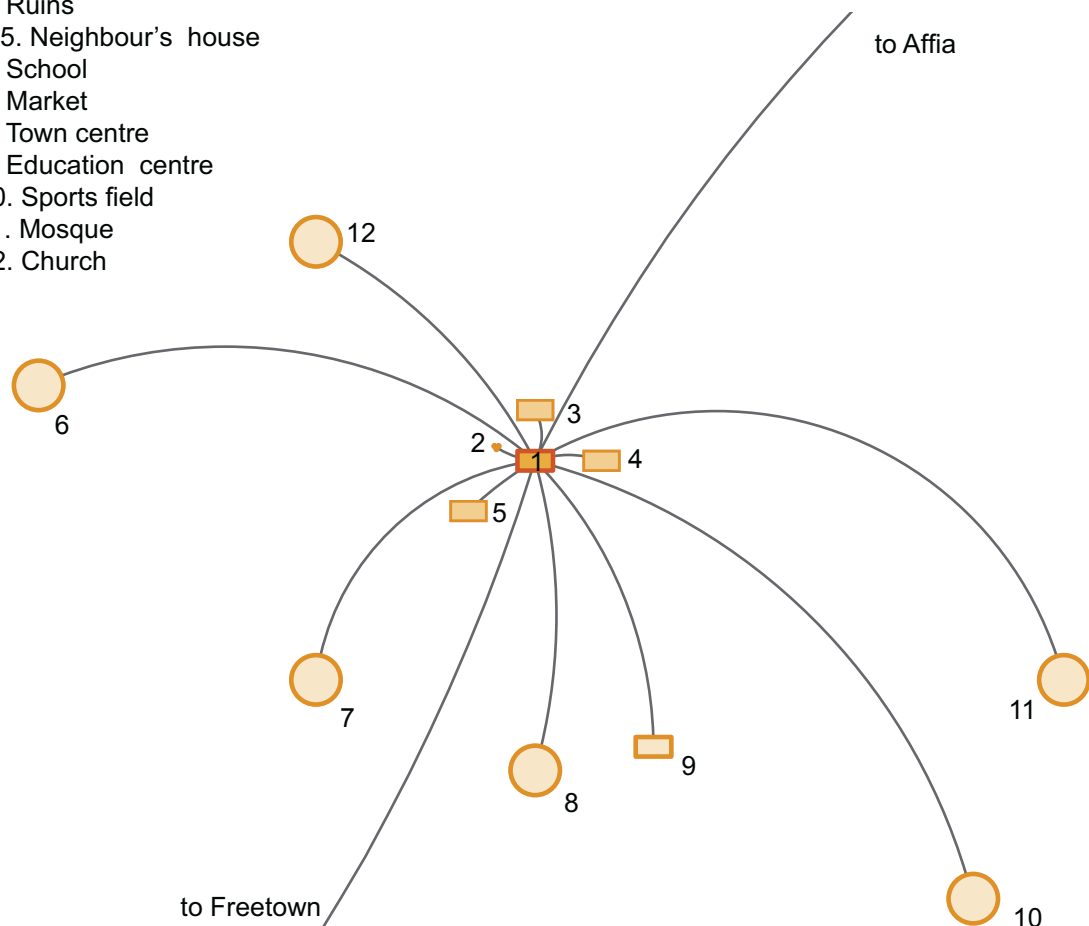


Figure 16: Housing network diagram from Kabala, Sierra Leone

A Different Approach to Western Dwelling: Pocket Neighbourhoods and the Tiny House Movement

Often in the North American culture, people easily become isolated in their own homes. Internet, television, home gyms, and large homes hardly offer the opportunity to interact with other individuals face-to face.

Although home address and location are still defined on the common scale of geography, people's emotional worlds are shrinking to the scale of their own house. They consider their direct surroundings as necessity, something that should be avoided as much as possible. People are much more eager to communicate with distant worlds and virtual addresses than with their neighbours. Their social space is not local anymore. It has been defined much more in virtual cyberspace, where they find everything easily and in private, without crossing others, than through their own social environments. Not to forget, on the street unpredictable encounters and conflict can occur. Therefore, under all these circumstances prospects of urbanity seem as an illusory notion. (Bobic 2004, 32)

Alternatives to this model exist, but are not common in a North American context. There are examples of how people can live in tighter quarters and still maintain a high quality of life. In his book *Pocket Neighbourhoods*, Ross Chapin defines the pocket neighbourhood as:

A cohesive cluster of homes gathered around some kind of common ground within a larger surrounding neighbourhood. (Chappin 2011, 8)

A concept such as a pocket neighbourhood could be functional within larger urban contexts, to increase connection among neighbours. This idea is not far from the idea of co-housing, a term developed in the 1980s by Kathryn McCamant and Charles Durrett, architects from United States. Cohousing consists of a curated group of individuals who decide to build their homes close to one another, and share common elements, and spaces. This is common throughout Scandinavia, where communities are truly connected



Figure 17: Le Corbusier's Cabanon in Roqueburne-Cap-Martin, France. (Fondation Le Corbusier, 2006)

to one another. With concepts like Pocket Neighbourhoods and Co-housing, residents are able to have smaller primary dwellings, since less private programmatic elements are shared with the group. When compared to the suburban model, sharing common areas and things, and having less personal space encourages individuals to interact more often with their surrounding community, thus reducing social isolation.

With this idea of shared common areas and less personal space comes the idea of living in tighter quarters. The tiny house movement has been becoming a popular mode of dwelling in the past decade in North America. It is founded in the idea of downsizing and living with minimal possessions. People are drawn to this idea because living on a smaller footprint can translate to less environmental impact. Many tiny homes built today employ sustainable and green building techniques. On top of sustainability, these small dwellings are required to be well designed to be perform the tasks that a larger house can. Bringing the scale of the house down to meet that of a human, also calls for highly detailed and tactile presence.

Architects have been designing small spaces long before the dawn of today's tiny house movement. Small temples were the norm in ancient Greece, and the tempietto of San Pietro in Rome built during the Renaissance. Le Corbusier had a 366 x 366 cm *Cabanon* in the south of France, where he spent many a summer (Figure 17).

Not only can smaller structures teach individuals how to live within their means and with less, they can also play a role in re-connecting human connections. Revisiting the notion of living small especially in built up urban areas can bring people together, and closer to where they want to live their lives.

CHAPTER 3: ANALYSIS AND METHOD

Existing Zones

To gain a deeper understanding of the built environment of the Plateau-Mont-Royal's laneways, an analysis of the prototypical Plateau block was conducted. The block can be broken down into several comprehensive areas or zones, each serving a different programmatic function. The Plateau block has 11 overarching zones which can be distinguished across most residential blocks.

These zones include the street, street-parking, sidewalk, front yard, front projections, residential row home, back projections, back yard, garage and shed, ruelle, and commercial. (Figure 18)

Street

The streets in the Plateau are what defined the location of residences. They are how residents know and get to know their cities. Physically, they range in dimension from main arteries, to two-way traffic to one-way traffic flow. The size of the street is dependant on the size of the block. Typically, a maisonette block (that is, a block that was originally designed for smaller two-storey row homes) is sandwiched between streets that are from 8-10 meters deep. A duplex block is associated with streets with a depth of 12-15 meters, and a triplex block has streets that are 15-20 meters in depth.

Most main arteries in the Plateau allow for two-way traffic, while smaller residential streets are usually reserved for single direction traffic flow. They can be one-way or two-way traffic flow.

Street Car Parking

Most vehicular parking in the Plateau is street parking. These parking spaces are reserved for residents of the area, and is controlled by city parking enforcement. Parking is not permitted on the lanes however, some block inhabitants access parking spaces or garages on their own properties through the laneway. Street parking is affected by snow-removal in the winter and street cleaning in summer months. This not only allows for maintenance, but also a way to ensures that cars are not parked for longer than a week. In recent years,

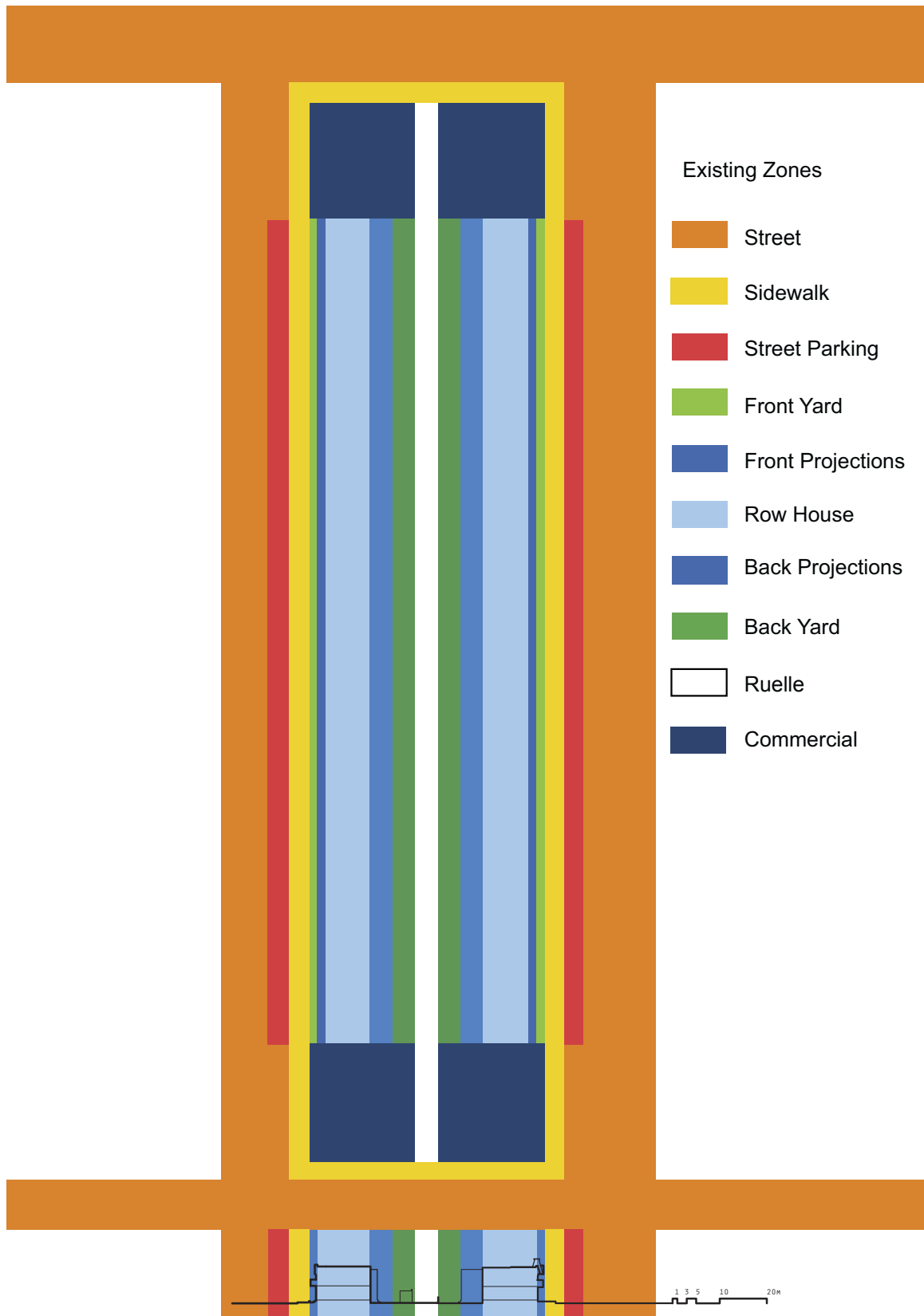


Figure 18: The typical block divided into zones gives a clear idea of where building types and urban objects fit into the natural rhythm of the neighbourhood.

urban objects such as the Bixi bike terminals have taken up some space in this zone.

Sidewalk

Situated next to the street-parking, the sidewalk is the prototypical pedestrian footpath. In the Plateau, they are typically 2.5 meters wide running north south, and can become larger to accommodate planters, vegetation and other urban objects.

Front Yard

The front yard varies in depth depending on the form of the row homes on the specific block. It can be fenced in or be open to the sidewalk. It is the landing for front staircases, and accessed by upper level tenants. The front yard can be used for gardens, storage, or bicycle parking. In the Plateau, it is a zone typically used for residents to display personal décor.

Front Projections

Front projections are appendage that protrude off of the front of a row house in the Plateau. The most notable projections are cast iron spiral staircases, balconies, and porches which can be spotted in most residential blocks throughout the neighbourhood. These projections allow residents of the Plateau to gain additional outdoor space and are what make the Plateau unique from other Montréal neighbourhoods. (Figure 19)

Residential Row House

The housing stock in the Plateau is comprised mostly of attached row houses, though there are a small number of taller apartment buildings. There are three typologies of attached row houses that are prominent in the area: the Maisonette, the Duplex and the Triplex. Duplexes and Maisonettes consist of two storeys, while the Triplex consists of three. Most of these archetypes were built in the second half of the nineteenth century, and were originally designed for similar purposes. Duplex units are typically small and square in plan. Triplex units are traditionally long and L-shaped in plan. This 'L' is usually mirrored by an adjoining Triplex to create a courtyard or light well in the backyard. The Duplex and Triplex were typically owner occupied on the first level, and tenants lived above. The Maisonette was designed for a single family occupation over two and a half to three levels

sometimes with a second unit in a half-basement.

Back Projections

Back projections like front projections are appendages off the rear of a row house. They also include spiral staircases, balconies and porches. These rear projections exude a more informal quality than front projections, as they are not street facing.

Back Yard

Backyards vary throughout the Plateau. Some backyards are used solely by the residents that occupy the ground floor, while others are divided up among the various residents that occupy upper floors. The depth of the yard depends on the rear projections and garage situation of each individual row house. It is common for backyards to house gardens for the summer growing season.

Garages and Sheds

When the Plateau was first being built, the rears of properties were typically occupied with various ancillary buildings such as coal storage sheds, horse carriages and other small secondary buildings. Traditionally, these buildings can occupy the entire width of the property, or are setback from either adjacent property.

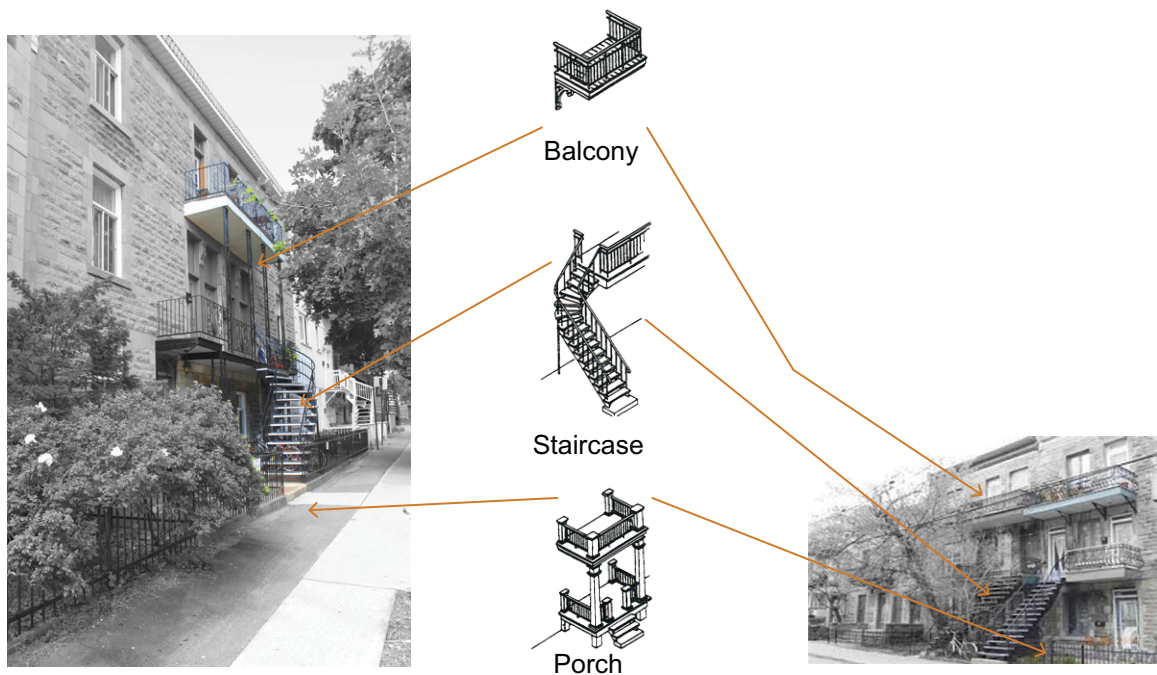


Figure 19: Front projections

Ruelle

The ruelles were a calculated design move implemented at the onset of the Plateau's development that allowed access to the rear of properties. They were primarily used to access the coach houses and coal sheds located in backyards. Sales people used this thoroughfare to sell their wares and services. Today, they are no longer used for their original purposes. Modern day ruelles contain power poles, sheds, garages, and are typically unseen spaces.

Commercial

The typical plateau block contains four retail locations located at the four corners of the block. This position is called the approach nose or the head of mid block condition, because of the fact that it stands proud of the rest of the buildings on a block. The most common type of commercial intervention in this position is the 'dépanneur' or the corner store (Figure 20). This type of retailer sells convenience items such as milk, bread, beer wine and cigarettes.

Urban Forms and Urban Objects

Urban Forms

While walking through the Plateau, certain forms tend to repeat themselves. Some are



Figure 20: Typical corner store or *dépanneur* in the Plateau

specific to certain zones, while others are more general. For example, the idea of building on top can only be applied in specific site conditions (in this case, building on top of a large warehouse which sits at the head of block). Building against existing structures or building a stand alone type can be applied in many conditions. (Figure 21)

Urban Objects

Like the urban forms, certain objects are repeated throughout the Plateau. Although they may take on variations other than those illustrated below (Figure 22), but they are common to most blocks throughout the borough. These items are used for their formal qualities, but are often inhabited informally by residents of the communities. For example, a fence may be a threshold between a private front yard and the sidewalk, but is commonly used as an informal bike rack.

Together with the urban forms typologies, they form a unique urban language that defines the Plateau. When looking at how to implement an architectural interventions to the lanes throughout the Plateau, these urban forms and objects become vital to the design process.

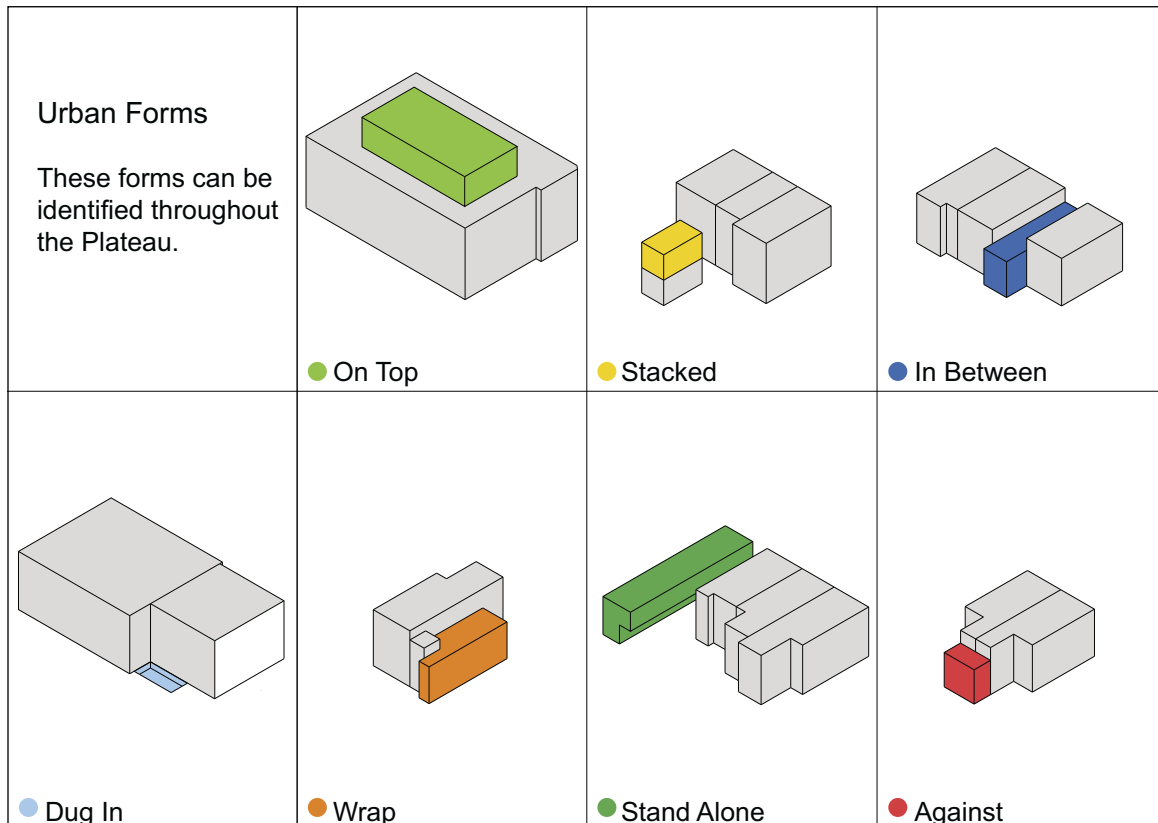


Figure 21: Built types in the Plateau

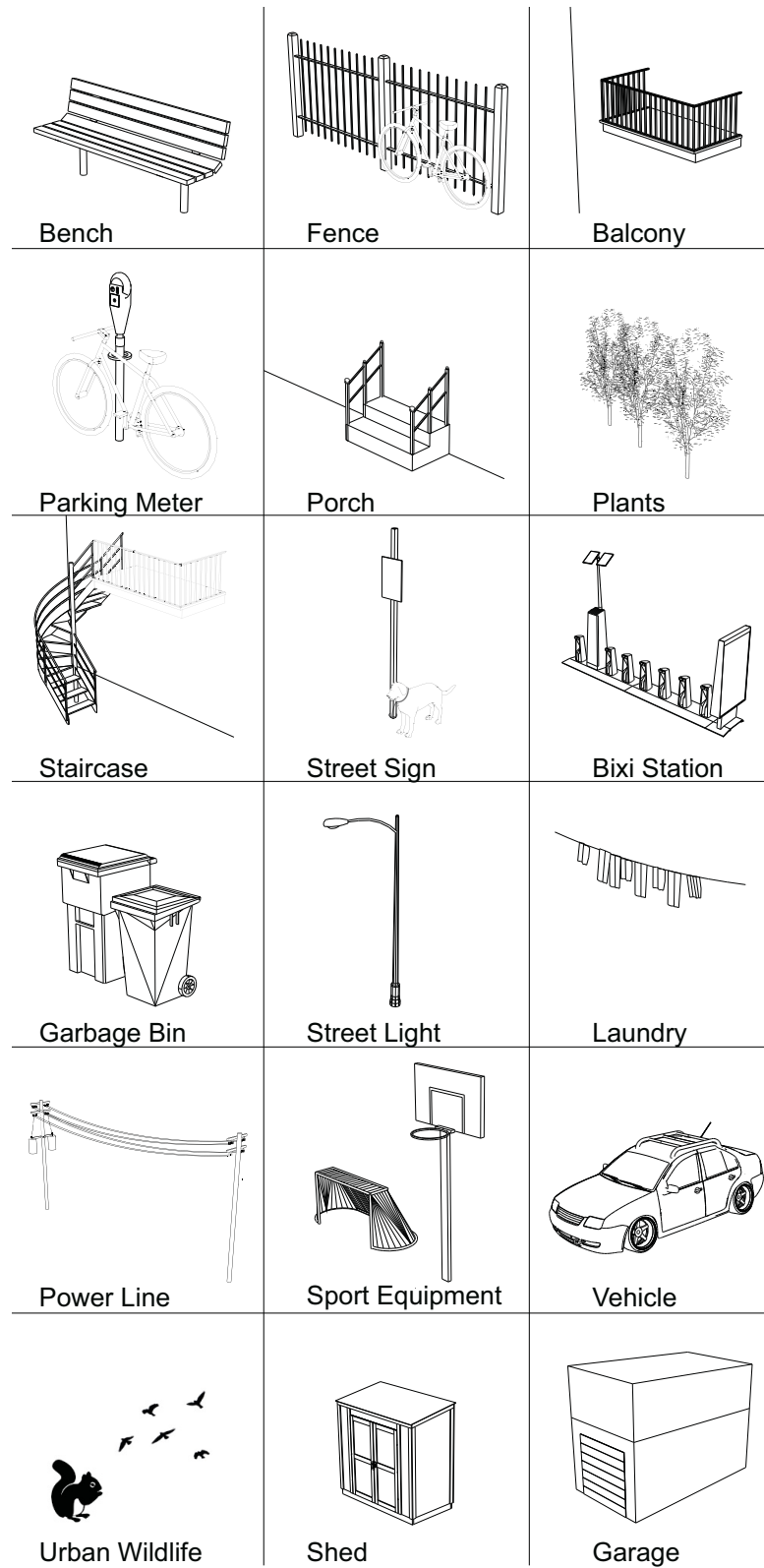


Figure 22: Urban Objects: These objects are a common sight in the streets of the Plateau. They help form the unique identity of the neighbourhood. Furthermore, they are an aid in identifying where new architectural interventions can be added into the existing fabric

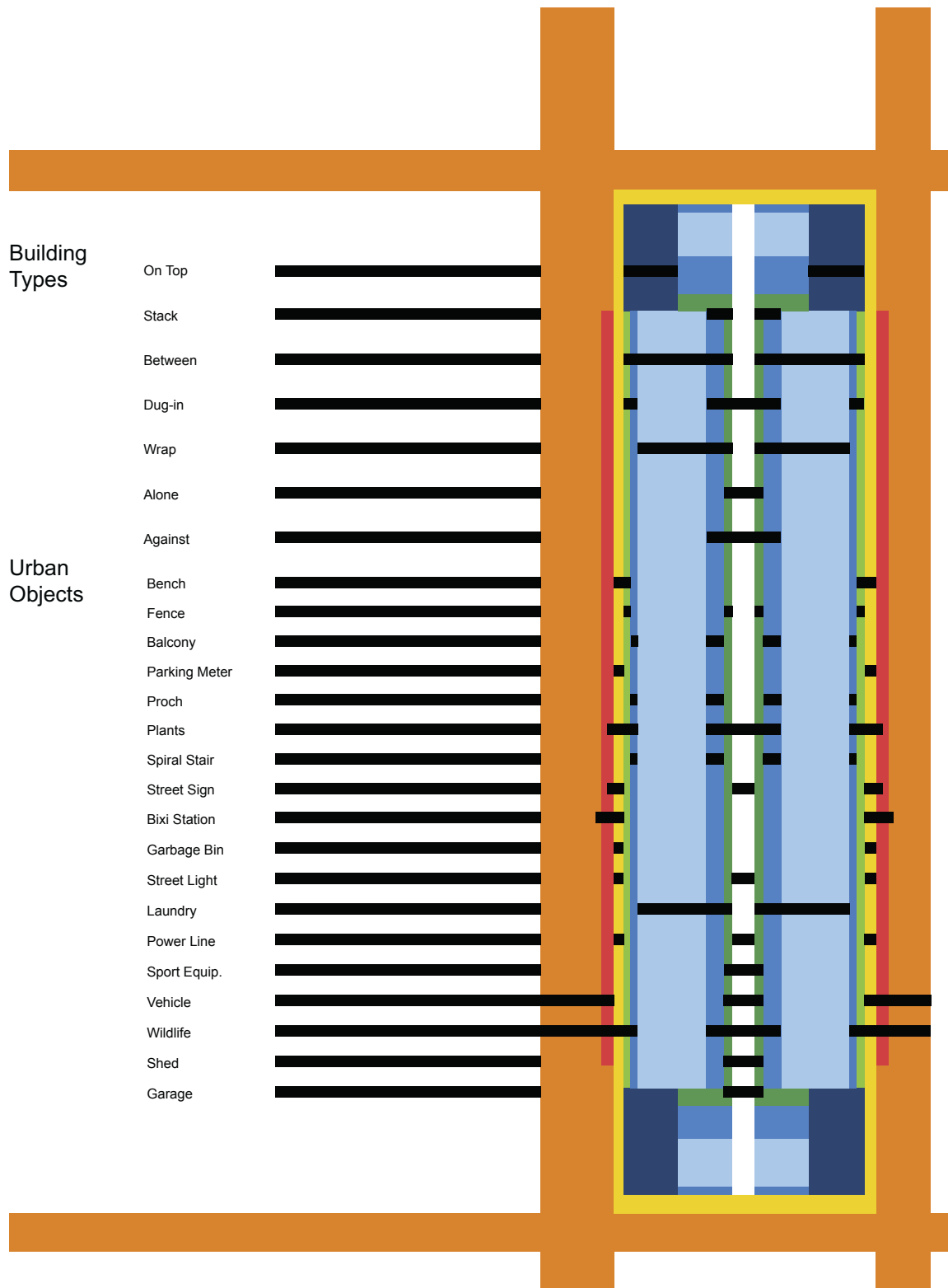


Figure 23: Urban Weaving: This diagram integrates the zones of a typical block on the warp (||), and the placement of building types and objects on the within these zones on the weft (≡). See figure 18 for legend.

Their placement within the block provide clues as to how to add to the morphology of the neighbourhood. (Figure 23)

Proposition for the Plateau

New Zones

For the implementation of architectural interventions in the ruelles of the Plateau, a system needs to be established. This will ensure that each ruelle is analyzed along the same guidelines to ensure that architectural moves are sensitive to the context of the neighbourhood.

Following the zone analysis mentioned in the previous section, new zones are applied to the lane. These zones, like the rest of the block are applicable to all blocks because of their uniform types. On top of the 11 existing zones, the lane and backyard is further divided into 5 zones running north-south. The new zones include lane buildings, lane thresholds, pedestrian path with service zone beneath, one-way vehicle traffic and parking and snow repository. (Figure 24)

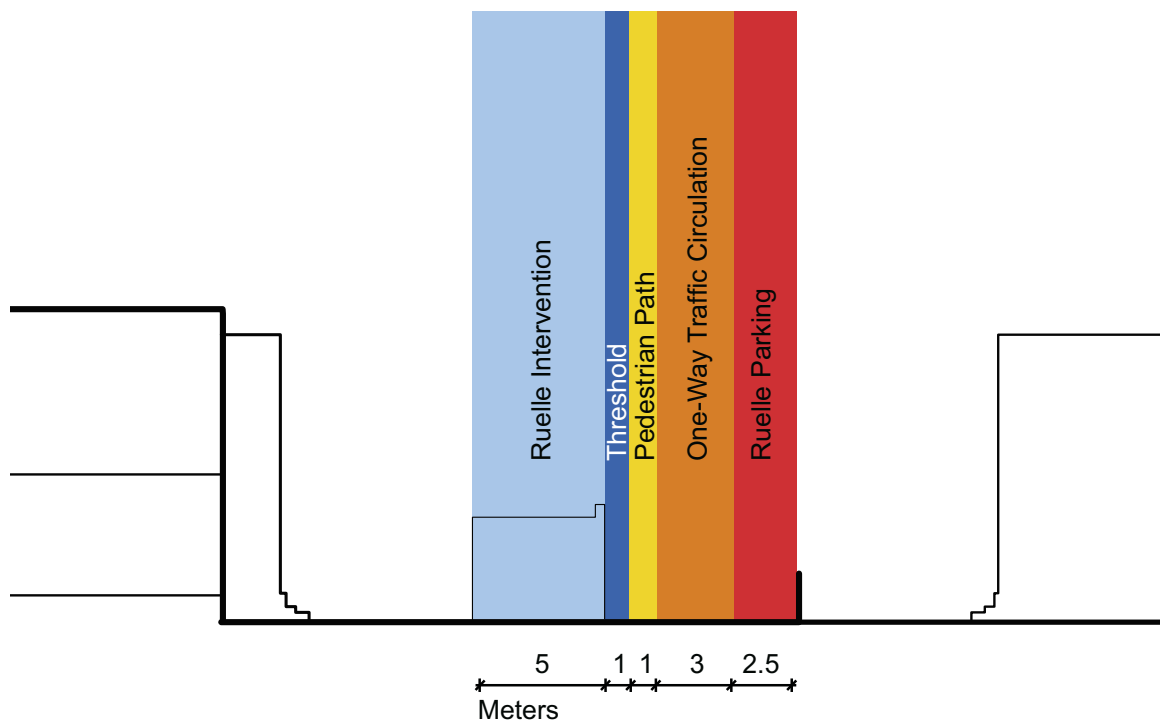


Figure 24: New ruelle zones

Lane Building Zone

The proposed site for the lane building is the back 4.5 meters of the backyard of existing properties. This zone has historically been occupied by other out buildings such as horse stalls, coach houses, and coal sheds, and more recently, garages and storage sheds. There is precedents for this type of form in the rear of properties facing and opening up onto the lane. The lane building zone occurs only on one side of the lane, as double barreled lane would require each side to have walkways, leaving insufficient space for the remaining interventions. Interventions occur in this zone only if there is sufficient space.

Lane Thresholds Zone

The threshold provides the key to the transition and connection between areas with divergent territorial claims and, as a place in its own right, it constitutes, essentially, the spatial conditions for the meeting and dialogue between areas of divergent orders. (Hertzberger 1991, 32)

The lane ways threshold zone is an area that occurs on private property, but cannot be built up. This leaves a buffer from public space to the private dwelling. This space can be occupied with a stoop or porch, similar to the idea of the front projection. It can also be expressed in a change in grade to denote the separation between private property and the public laneway. This buffer space is also important due to existing Montréal by-laws which state that buildings on a lane must the setback a certain distance from the existing lane.



Figure 25 and 26: Examples of personal touches in threshold conditions in the Plateau

Also located in this zone is the physical barrier that separated private backyards and the public lane. This barrier is materialized in the form of a fence that morphs to take on different programmatic roles. It can be a simple fence, a bench, a planter or a screen that is an indication of the division of private and public space.

Pedestrian Path and Service Zone

The pedestrian path or *petit trottoir* is a scaled-down version on the front street's sidewalk. It occupied a one meter strip between the threshold and one-way traffic zone. It is differentiated from the traffic zone by a change in ground cover material. A change in grade (like happens on the front street) does not occur on the lane which allows for snow removal with a snowplow during the winter months. Currently, the lanes are set up as informal traffic areas, where cars are given priority. By adding a formal *petit trottoir*, pedestrians and drivers have a visual indication of the space they can comfortably occupy.

As the laneways is a new development within an existing setting, it requires a set of hookups to the surrounding municipal systems. These systems include water, sanitary disposal, power and communication.

Water and sanitary lines: Currently, no by-laws confront the issue of connecting additional water mains or sanitary drainage lines from a new laneway development to the existing municipal infrastructure. The proposed strategy for the laneways of the Plateau is the installation of a shared supply line underneath the pedestrian pathway. This means that the new line is hooked up at the ends of the lane to the municipal main on the adjacent streets. It is installed and maintained by the city, but it becomes the individual property owner's responsibility to install and maintain the connection from the supply line to their building.

Power: In the lanescape, there are currently power lines present that supply power to the existing row houses. There is however, means to run power supply under ground. The proposed strategy for the laneway dwellings is to add additional power lines that will run under the pedestrian path and surface in above ground transformer boxes when necessary, then run to the individual dwellings. These transformer boxes can become dual purpose for both the power and communication hookups, and housed in a box that

becomes seating for the laneway.

Communication: Like the power supply. This proposal locates the communications connections are run underground and surface when needed in to an above ground router, which can be accessed by individual units.

One-way Vehicle Circulation

Car traffic is a commonality on the lanes, and can remain as such, as long as it is reduced to one-way flow. This would reduce the congestion, and allow for more designated pedestrian space. The direction of flow is based on the traffic flow of surrounding streets. Keeping cars in the lane would enable residents to continue to park their cars, while keeping circulation at a reasonable pace with in its own designated area.

Parking Zone

The proposed form of the ruelle is not symmetrical; one side of the lane is designated for architectural interventions, and the other is reserved for parking. The parking zone is limited to a 3 meter setback from the edge of the lane and extends into the back of properties if needed. There are lanes that are wider than 4 meters, in which case, the leftover space can be allocated to the parking zone, with a small portion taken from residents lanes. This parking lane becomes year round parking for residents of the primary row-homes, and resident of the lane. Like the front streets, parking is to be parallel, and can be regulated by the city. An additional benefit of this zone is that it can be used for snow storage in the winter, which allows for the pedestrian and vehicular circulation to remain clear of snow. If there are existing structures in the parking zone, the ground covering by-passes them, allowing for existing buildings to remain in tact, and adding diversity in the new lanescape.

Intervention Principles

Based on the analysis done of the surrounding context, and the zones that have been established, 10 laneway intervention principles were designed for the Plateau in order to ensure that development of the lanes occurs in a planned fashion. (Figure 27)

1. Single-Loaded Lane

All new built interventions are restricted to one side of the road. This is a way to keep the lane at a manageable density. Also, this results in only one side of the lane requiring service (water, sewage, communication and power). Finally, developing one side of the lane allows for the parking zone along the opposite side.

2. Commercial Zone

All commercial lane interventions to be located in the commercial zones. Commercial activities are limited to the corners and main streets in the front street, and are to follow the same rules throughout the laneway system.

3. Mid-Block Access

Mid-block access point where ever possible. This occurs when there is a break in the row houses of the main street, and is not common in every block. This gives the ruelle access to the street, as well as access for fire services.

4. One-Way Traffic Flow

Vehicular traffic is to be restricted to one-way travel. This will aid in car congestion, while still allowing residents access to park in either their garages, or in the allocated lane parking spaces. The direction of travel may be based on which side parking is on, so that drivers exit on the lane side of their cars.

5. Critical Lane Dimensions

The lane's dimensions are to be a one-meter pedestrian walkway, a three-meter vehicular thoroughfare, and a 2.5 meter area for parking. The new walkway is to start on the edge of the existing lane where, followed by the 3 meter vehicle thoroughfare, then with the 2.5 meter parking zone. When the existing lane does not provide sufficient space for these programmatic elements, the space for parking is borrowed from the resident's backyard.

6. Setbacks

A one-meter setback from the sides of adjacent properties should be maintained, unless there is an attached unit, in which case at least a one-meter setback must be maintained

per property. This allows for existing residents access to the lane from their properties.

A one-meter threshold condition setback from the edge of the lane's boundary. This defines the space from private to public, and allows for a buffer for people exiting the intervention before being on a pedestrian thoroughfare. This space may be occupied with a step or stoop condition that could create a change in grade.

7. Two-in-a-Row Maximum

Lane interventions can be attached as the row houses are, but to a maximum of 2. This allows proper access to light and air. Also restricting attached lane buildings to two-in-a-row allows for access from the existing row house to the lane.

8. Height

The height of the adjacent row house dictates the height restriction of the laneway intervention. If the row house is a duplex or maisonette (two storey building), then the intervention can be no higher than 1 storey, or 3 meters. If the row house is a triplex, the intervention can be up to 2 storeys. This is what has traditionally happened with outbuildings located in the rear of properties. It also aids in preserving sight lines from the row house to the lane.

9. Replace Green Space

All green space taken up by laneway interventions will remain green, though the form may vary. For example: Green roof present of all new lane buildings. The parking zone surface is made from hollow bricks so greenery can grow in between. This way, although some private property has been sacrificed for the good of the community, it remains green as it was originally.

10. Utility Strip

Services to new laneway units including water, sanitary drainage, power and communications are to be installed underground under the one-meter pedestrian walkway.

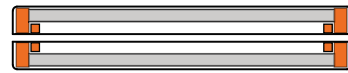
After these principles were established, they were used to inform the form, type and materiality of the architectural interventions.

10 Principles for Ruelle Interventions

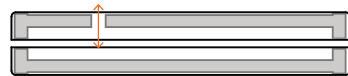
1. Single-Loaded Lane



2. Commercial zone



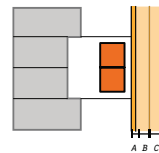
3. Mid-Block Access



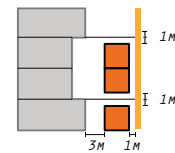
4. One-Way Traffic Flow



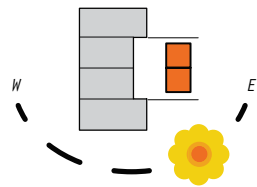
5. Critical Lane Dimensions



6. Setbacks



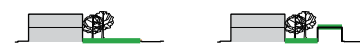
7. 2-in-a-row maximum



8. Height



9. Replace Green Space



10. Utility Strip



Figure 27: 10 principles for architectural interventions in the Plateau's ruelles

Laneway Architecture

The architectural history of the Plateau's laneways has several archetypes, including the coal shed, the stable, the shed and the garage. (Figure 14) Although some of these have evolved or been replaced in the urban landscape, their form remains visible in the ruelles today.

Six architectural types that have been developed in conjunction with the methodology. These types have been inspired by the history of the place, and have been designed to fit within the new zones proposed in the last section.

Built Types

The following sections illustrate the various built types of this method. They offer several choices for small footprint dwellings and buildings. All units are lane-facing, and accessed by the main entrance on the lane.

A. Garage with Unit Above

Since the onset of laneways in the Plateau, there have been coach houses, where horses were kept below and their chauffeur lived above. The garage with unit type is designed along these traditional lines. The garage would house a car and storage belonging to the owner of the primary row house, while the small apartment could be rented out, or used as an additional room. This unit is two stories, and has a 5m² foot print. Primary access to the garage is through a garage door on the lane, and a secondary door connecting the garage to the primary row house's back yard. The upstairs unit is accessed by an internal staircase which is accessed by a lane-facing door. (Figure 29)

B. Small Single Storey Unit

The single storey unit occupies a modest footprint of 5m² over one floor. The space is open so that light can penetrate deep into the unit without obstruction. It contains a full washroom, sleeping /living area with convertible bed and full kitchen. The entrance is sunk into the ground to separate the public street from the private house. This type of lane building is ideal for a short term guest suite or extra room for the primary row house. This unit can be coupled with another single storey unit and separated with a firewall.



Figure 28: Elevation of type D: Two-Level Split Unit

C. Single Storey Unit

Similar to the small single storey-unit, but with an area of 27m². Again, the space is open so that light can penetrate deep into the unit without obstruction. It contains a full washroom, sleeping area, and full kitchen. The entrance is sunk into the ground to separate the public street from the private house. This type of lane building is ideal for an individual, and can wither be a rental property, or independent.

D. Two-Level Split Unit

The 2 storey unit offers 54m² of living space over 2 floors, the largest of the archetypes. Like the single storey unit, it is designed to be open concept so that light is able to reach into the back of the unit. It contains a full kitchen and bathroom, a sleeping area, living area and office space. The main entrance is accessed by the upper patio, and a secondary entrance can be accessed through the below grade area. The two access points allow for both a residential and office program, each with their own entrance. This unit is ideal for an individual or couple who work from home. It can be used as a rental suite by the primary row house owner, or sold as a independent property. (Figure 28, and 30)

E. Studio Unit

The studio is the smallest of the archetypes, with a footprint of just 4m². It can only be a parasite to the primary row house, as it does not have a washroom. It was designed to be a home office, or studio, or an extra bedroom for house guests or angsty teens.

F. Commercial Unit

Keeping withing the zones mentioned in the previous section, the commercial units are only able to be placed at the North and South entrances to the lane, behind existing commercial ventures on the main street. As the intervention principles state, the height is dependant on that of the main street commercial venture's height. This unit offers 23m² of interior space, and can be used for a multitude of commercial activities, such as a coffee shop, barber, book store, or art gallery. (Figure 31)

Within these six built types, there are three programmatic elements: dwelling, working, and storage. These programs are materially expressed on the exterior faces of each

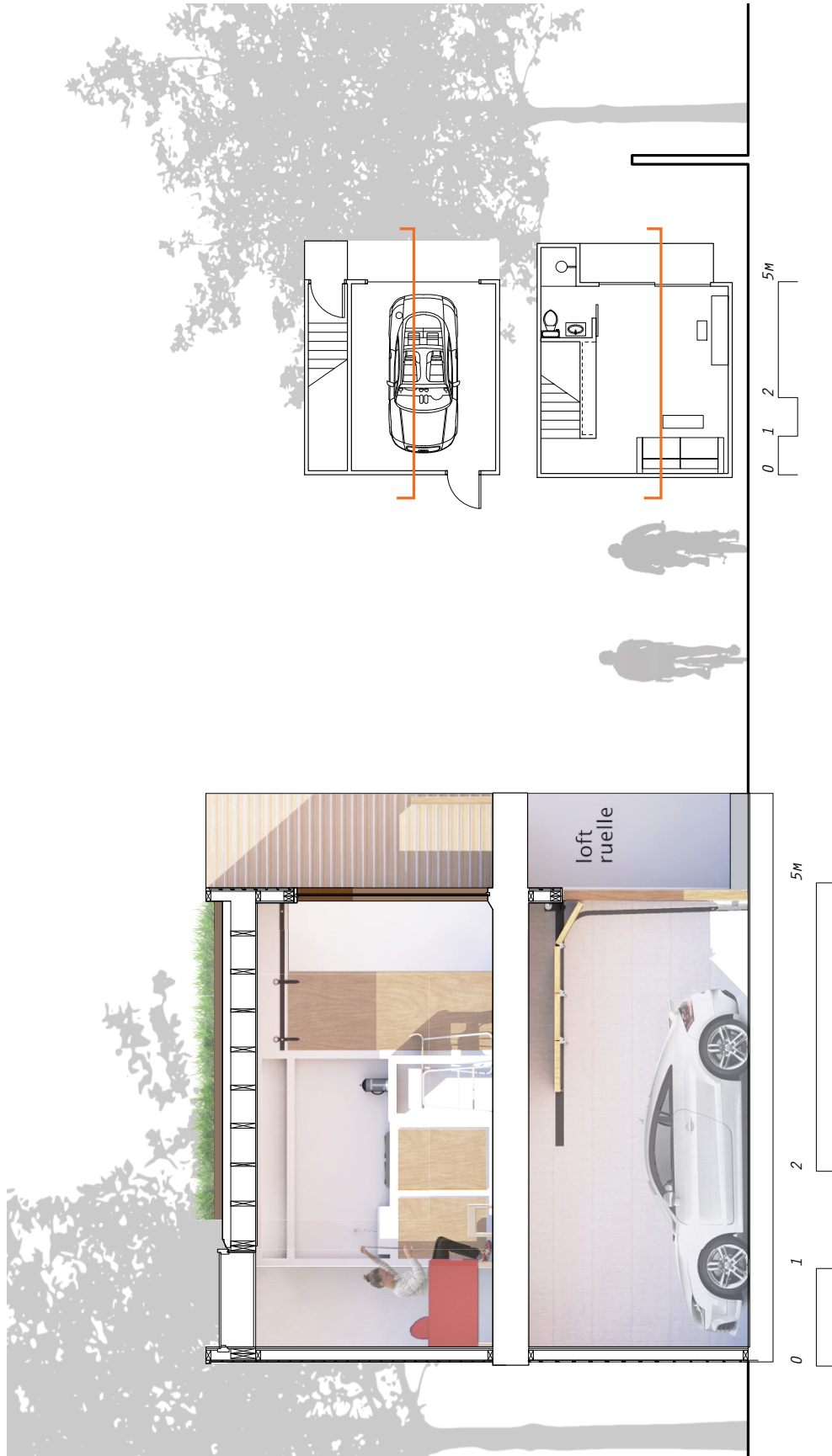


Figure 29: Section Aa through 2 storey garage unit



Figure 30: Section Bb through two-level- split

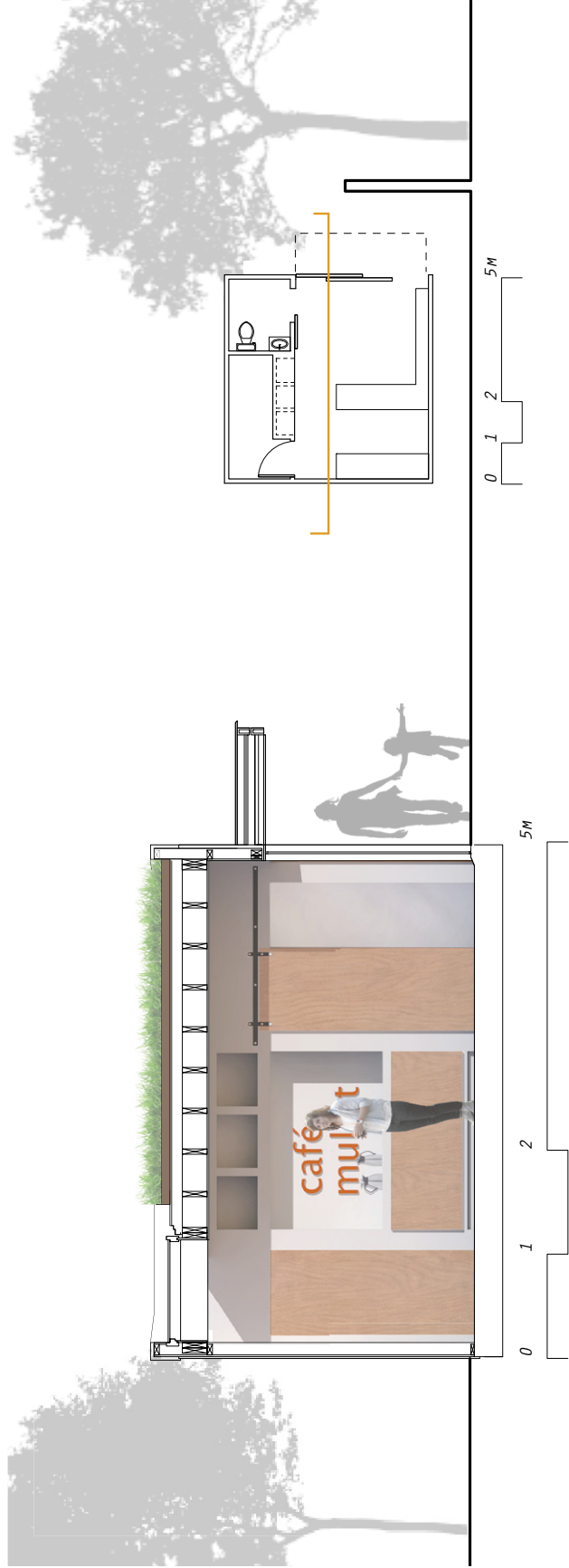


Figure 31: Section Cc through a single level commercial unit

unit, creating an architectural language for the ruelle. Where there are two programmatic elements in one built type, the building is clad in two materials. Units devoted to dwelling are expressed with 4" tongue and groove weather board fixed horizontally with a 1/2" reveal between boards, which can be found on type A,B,C and D. Working units such as the commercial unit (F) and the studio (E) are clad in corrugated steel. Finally the lower level of the garage unit is clad in a similar fashion to the dwelling program except with 6" boards.

Form

There are three basic forms within the types which include single storey, split level, and 2-storey. These building forms can be found throughout the Plateau in various building types. All of the built types mentioned above can be identified as one of the three forms.

Single Storey

Examples of single storey buildings in the Plateau include cottages, sheds and garages. Single storey buildings on the main streets of the Plateau are rare, as this neighbourhood prides itself on being a low-rise yet high density area. However, there are some examples of cottages, which are small attached single-level dwellings. Most single storey buildings can be found in the lanes, they materialize as garages, and sheds. These buildings have influenced the studio and commercial built type (Type E, and F; Figure 31).

Split-Level

Split-level forms are common in the plateau, and usually signify a change of program or unit division. For instance, the Maisonette traditionally has a half-basement which was rented out as an income suite, while the property owner lived upstairs. Another example of the split-level occurs on the main commercial streets of the Plateau. Often there are offices, restaurants or shops in the half-basement of a residential building which can be accessed by a staircase.

In this proposal, the split level denotes a dwelling. All dwelling units (types B,C and D), an change of grade occurs before entering into a home. This adds to the architectural language of the ruelles by acting as a threshold between public and private space. (Figure

28 and 30)

Two-Storey

The maisonette and duplex are among the most common residential building types throughout the Plateau. In these examples, both floors are used for dwelling, however there are instances where two-storey buildings are used for two different programmatic elements. On residential and commercial street corners, the approach nose condition consists of commercial on the bottom level, and residential on the second storey floor. Also, the historical typology of the stable with apartment above was common through the Plateau. This is where the inspiration for the Garage with unit above unit comes from. It is two separate programmatic elements combined into one building over two floors. (Figure 29)

Fences

A crucial form in this proposition is the fences both on the intervention side and parking side of the lane (east and west sides). These fences act as organizing elements, and aid people in knowing what is public and private. The fence on each side of the lane presents in different form, as its purpose differs. On the intervention side, the fence serves both the row house dwellers, and acts as a privacy barrier from the lane, but also allows them to access the lane from their backyards through the gate. The interventions fence was designed with horizontal wood boards with spacing that either allows to views to the lane or restricts them. On the lane side, the fence morphs from a bench to a planter or a divider depending on individual taste. The fence line undulates back and forth depending on the

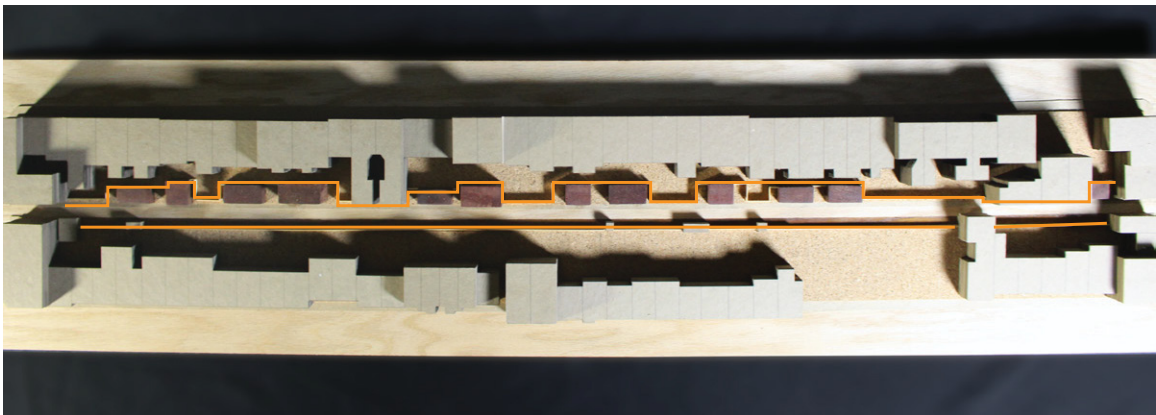


Figure 32: Test block model (1:250) showing the fence as an organizational element

absence or presence of a lane intervention.

The fence on the parking side of the lane acts primarily as a barrier for the existing row houses' back yard. It runs along in a straight line dividing the parking zone from the row house's' back yards. Like the intervention fence, it offers row houses direct access to the lane through a gate at each property. Currently fences on the ruelle serve not only as a privacy barrier, but also for local street artists to display their graffiti. The parking side of the fence has designated areas for graffiti, to maintain the that integral part of the lanes.

Land Title

Three types of ownership can occur within the laneways types, parasitic, rental suite, or independent. These various types of land ownership adds diversity to the real estate market of the Plateau by offering additional rental properties as well as housing stock.

Parasite

A laneway intervention can act as an extension to the existing row house, providing extra space for the owners. It could be used as a studio or home office, or for a returning adult child or aging parent. These units are smaller scale (type E; studio unit) and do not necessarily need all services such as plumbing, as it relies on the primary dwelling.

Rental Unit

The lane and the lane building can be used to generate income for the property owner. In this case the unit is self sufficient, and completely independent of the primary row-house. The unit can be rented out at market rate, or used as a guest house by the property owner.

Independent

The initial property owner can decide to parcel their land and sell it and the lane building off at market rates. This creates small inner-city real-estate that could benefit young adults looking for urban property at a small scale to suit their reduced-space requirements, or seniors looking for an affordable dwelling close to amenities.

CHAPTER 4: TESTING THE METHOD

The many elements of the methodology that were laid out in the previous section form the basis for how to develop the Plateau. To see how these elements can be combined to create the architectural vision of a more vibrant urban space within the Plateau, they need to be tested. In this section, the site selection strategy will be discussed, followed by the application of the methodology to one block as the primary test. Lastly, other blocks are tested to verify the practical application of the method throughout the Plateau.

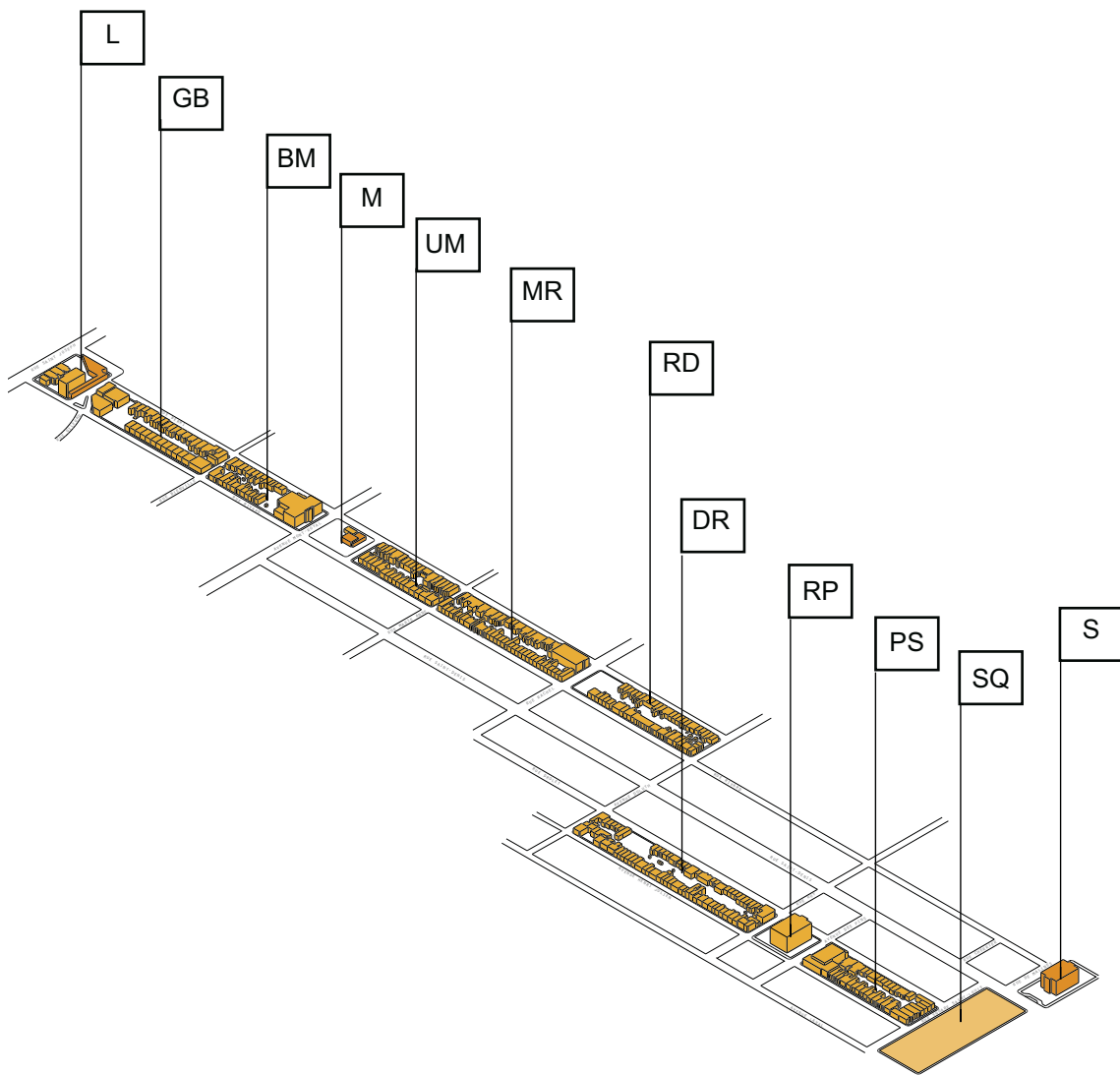


Figure 33: Initial test blocks identification

Site Selection

In order to choose specific ruelles on which this thesis' methodology could be tested, a cross-section through the neighbourhood was selected to obtain a variety of conditions present throughout the Plateau. (Figure 33) This cross-section comprised of 12 blocks that run South/North across the Plateau, and included three metro stations, three parks, one elementary school two Ruelle Vertes, and seven residential blocks. (Figure 34-1)

Because the methodology has 10 specific design principles which require a certain amount of space, and existing row house conditions, the non-residential blocks were exempt from being tested. This left seven remaining blocks to choose from (Figure 34-2). Within the past 20 years, a new development has taken the place of original row homes on block GB. These new buildings have no backyards, and therefore to not meet the ideal conditions for this methodology, and was not used as a test case (Figure 34-3). Ruelle PS is closed to

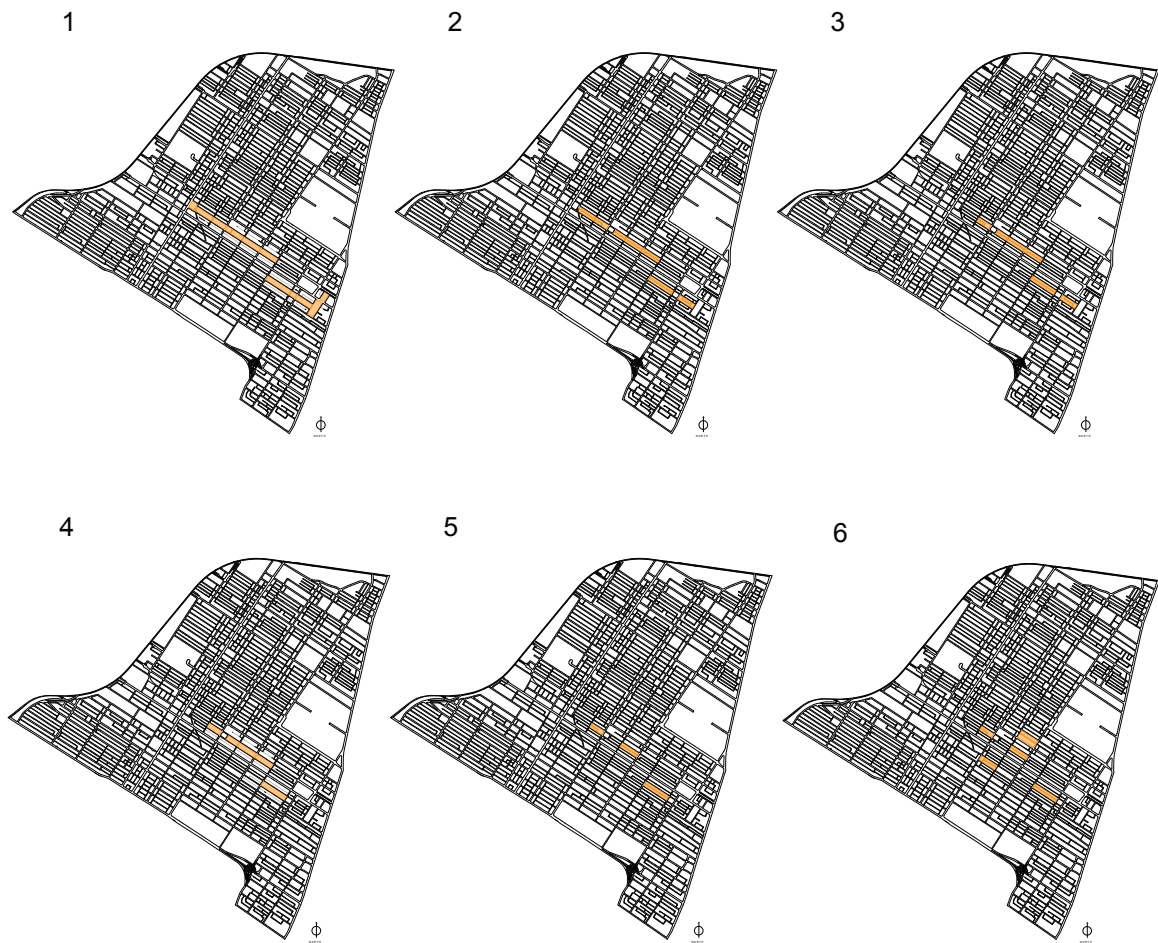


Figure 34 (1-6): Plateau site selection diagrams

car traffic, which did not meet the design criteria of the 10 principles. This left 5 lanes as potential candidates for testing the methodology. (Figure 34-4) Further analysis of these five revealed that ruelle RD and ruelle UM had less space to apply all 10 rules of the methodology. Therefore, ruelle DR, MR and BM were selected for testing the methods of this thesis. (Figure 34-5) Finally, two additional blocks selected at random to show the method could function throughout the neighbourhood. (Figure 34-6).

Once the test sites were selected, their context and surrounding were analysed using a concept called urban judo, originally coined by Ken Greenberg. Using the momentum from the urban context surrounding the block in question, meaningful design moves can be made that are well suited to their environment.

In tackling the transforming forces of our era, we need to identify the momentum that is already in play—the projects, plans, the aspirations, the big moves and small. As in the martial arts, where the objective is to capitalize on an opponent's momentum rather than confronting his or her energy head on, in city building we employ a kind of "urban judo" to marshal the latent or misdirected forces. (Greenberg 2011, 181)

Once a general concept of the block's area was understood, all of the 10 intervention principles were applied to get the form of the ruelle development.

Initial Test Site: Ruelle Duluth / Roy

To address the process of applying the methodology to the initial test block, the 10 design principles will be used as a guideline.

-All architectural interventions have been located on the west side of the laneway (Principal 1, *Single-loaded lane*).

-There is one commercial intervention located in the commercial zone at the North-West entrance of the ruelle. The lane cafe is located behind a restaurant, and is easily accessed from the ruelle as well as the main street. (Principal 2, *Commercial zone*)

-There is a park located on the main street on the east side of the block. A 1-meter strip was designated as a mid-block access path leading from the main street to the ruelle. (Principal 3, *Mid-block access*)

-Car traffic flow runs one way from South to North. This is based on the surrounding traffic

patterns. There are more south-north arteries in close proximity to the block, so traffic flow on the lane will remain consistent to its surroundings. (Principal 4, *One-way traffic flow*)

-The critical lane dimensions are adheres laid out in the Principles are strictly adhered to. A 2.5 meter parking zone borders the backyards on the east of the lane, followed by the 3 meter one-way traffic lane, one-meter pedestrian path, one-meter threshold, and finally the 5 meter intervention zone on the west side of the lane. (Principal 5, *Critical lane dimensions*)

-All interventions are setback 1 meter from the pedestrian path (the threshold zone). In all cases, there is at least 3 meters between the rear of the row house and the rear of the intervention. Unless interventions are attached, there is at least a 1 meter setback from either adjacent property. (Principal 6, *Setbacks*)

-To ensure that all interventions have access to air and light, there are no instances where more than two buildings are attached. Also, a firewall which protrudes past the roof line is present when interventions are attached. This is borrows from the row house typology of the main street. (Principal 7, *two in-a-row maximum*)

-All single-storey interventions are located behind either 2 or 3 storey buildings, and all split level or 2-storey interventions are located behind triplexes. (Principal 8, *Height*)

-All new ruelle buildings have a green roof. Also, the parking zone is paved with grass pavers which allow grass to continue to grow. This replaces the green space that was taken in order to implement the laneway development. (Principal 9, *Replace green space*)

-Utilities are located below the pedestrian path on the west side. (Principal 10, *Utility strip*)

Using the building types, and principles, the method was successfully applied to the initial test block (Figures 35, 36 and 37). Based on the initial trial, 4 additional test ruelles were conducted (Figures 38, 39, 40 and 41). Each test ruelle offers something slightly different that the other. For example, some offer more open space on the east side of the lane versus the west. Some blocks had the capacity for mid-block access points which is helpful when the blocks are 120-200 meters long. Others blocks are smaller, but wider with more

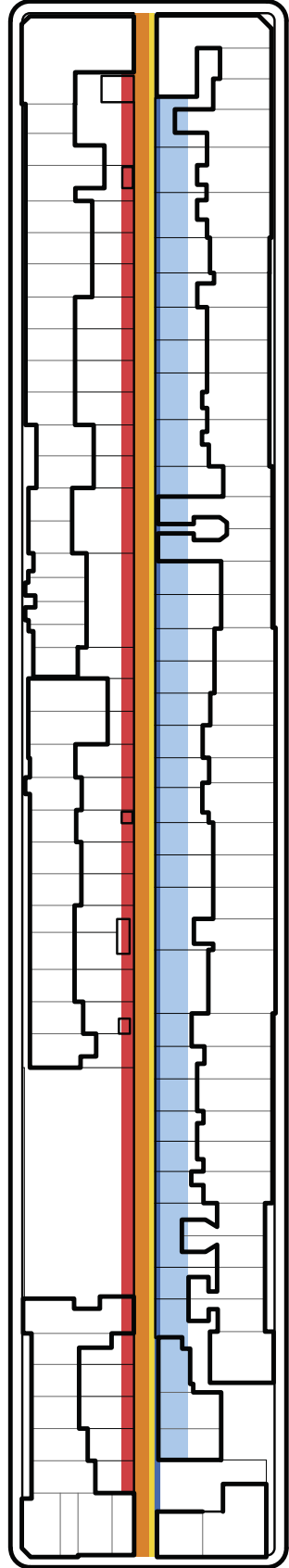
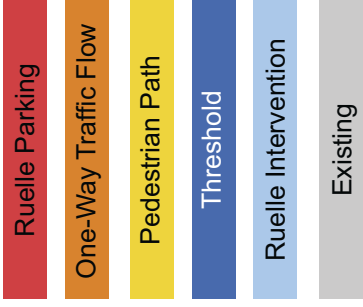


Figure 35: Zone methodology applied to Ruelle Duluth // Roy



Figure 36 and 37: Plan and elevation of initial test ruelle Duluth // Roy

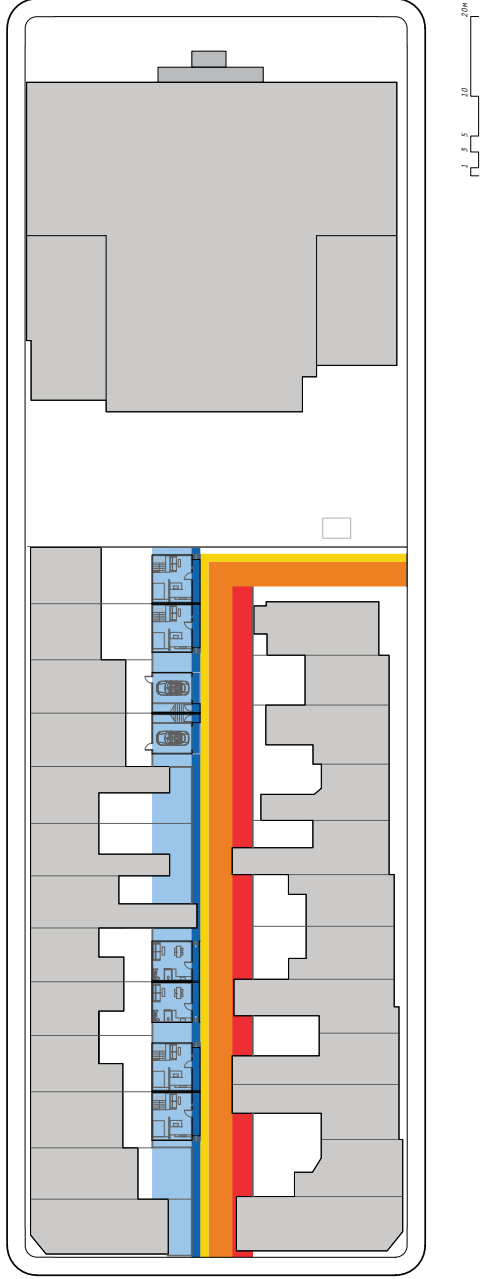
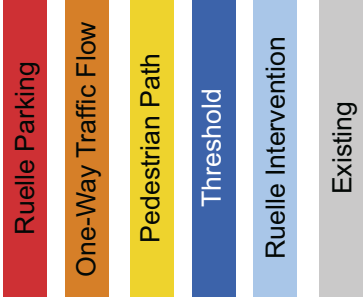


Figure 38 : Plan of method test on ruelle Blainville // Mont-Royal (Ruelle BM)

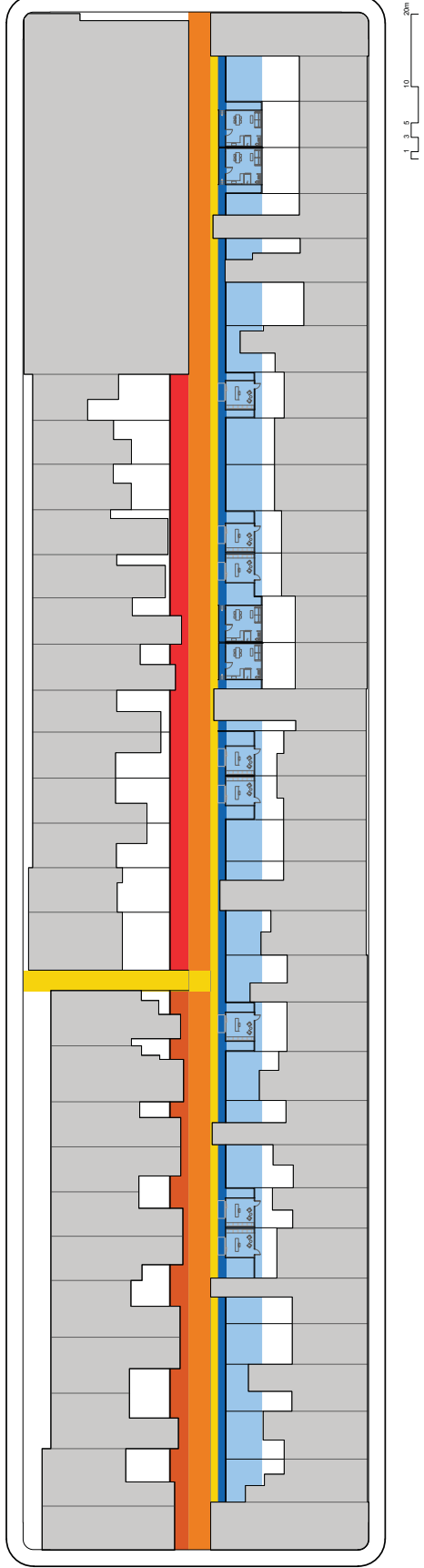
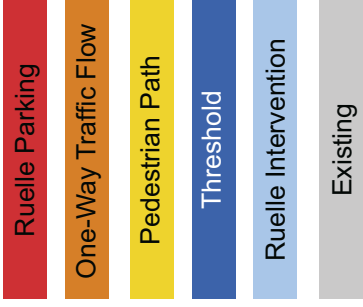


Figure 39 : Plan of method test on ruelle Marie-Anne // Rachel west (Ruelle MR)

- Ruelle Parking
- One-Way Traffic Flow
- Pedestrian Path
- Threshold
- Ruelle Intervention
- Existing

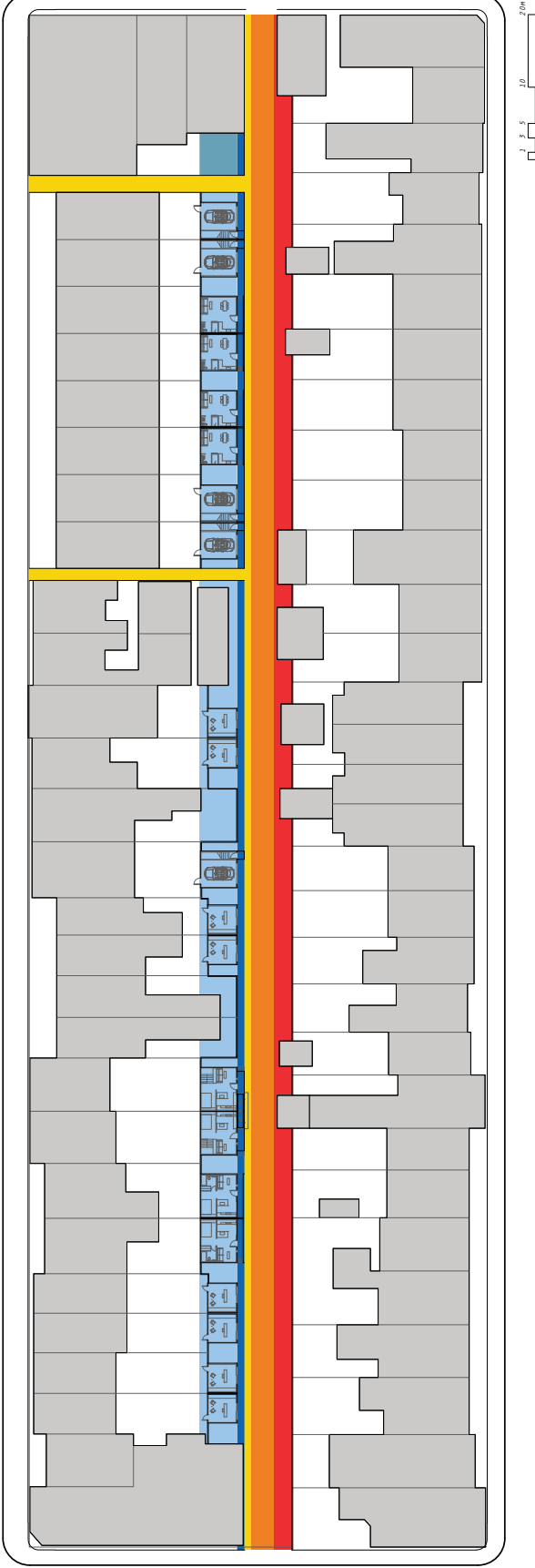


Figure 40: Plan of method test on ruelle Marie-Anne // Rachel east (Ruelle MaRa)

- Ruelle Parking
- One-Way Traffic Flow
- Pedestrian Path
- Threshold
- Ruelle Intervention
- Existing

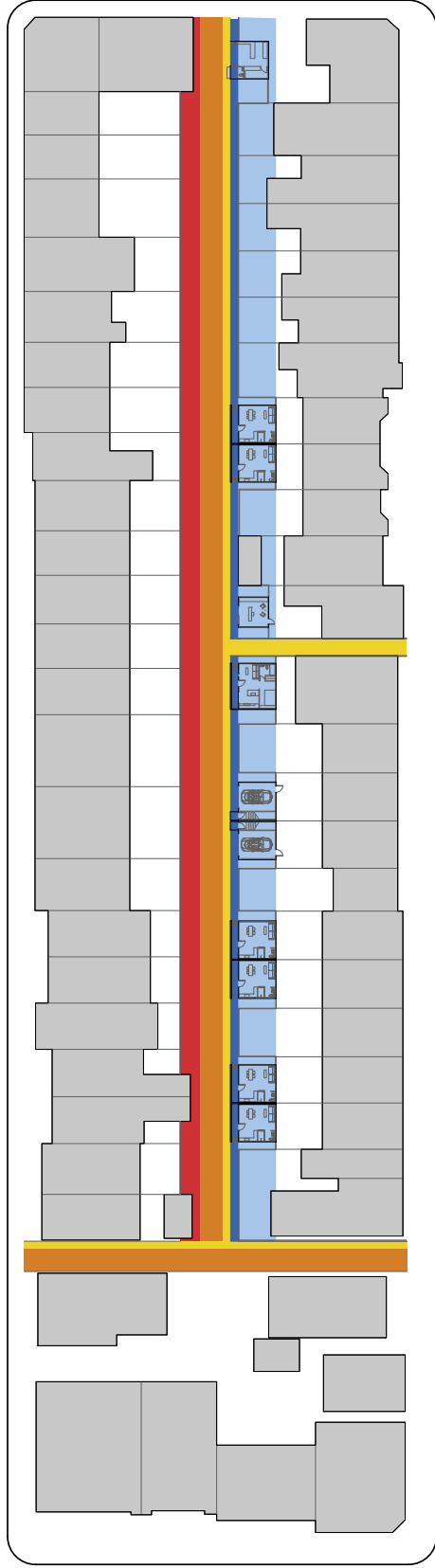


Figure 41: Plan of method test on ruelle Mont-Royal // Marie-Anne (Ruelle MM)

open space in the inner block, which made it a great candidate for built interventions.

Atypical Blocks

The aim of this methodology is to be able to ameliorate as many blocks throughout the Plateau as possible. There are blocks that do not initially seem as fit for the rigidity of the method applied to the last five blocks. This is not to say that they can't benefit from one or more of the proposed zones. For example, if there was insufficient space for built interventions, a ruelle could still have the designated pedestrian path, one-way car circulation, and parking, or a combination of these. These prove that the application of my method can be applied to most ruelles.

Furthermore, there are blocks in the Plateau that offer more space than the average block. These types of blocks are the exception rather than the rule, but they too can benefit from the application of the methodology with some modifications. The following test block (Ruelle Marie-Anne//Bureau) has been designed as an atypical block. The inner block offers space enough for a mid-block park. Additionally, the space in the existing properties allow for the lane buildings to have their own backyard. (Figure 43)



Figure 42: Ruelle MR after application of the methodology (See figure 3 for existing condition)



Figure 43: A-typical block test

CHAPTER 5: CONCLUSION

The initial goal on this thesis was to create a new urban condition in the city by developing underused space into something more vibrant. Although the Plateau Mont-Royal is a densely populated area with ample amenities to offer its residents and visitors, there is a clear opportunity to transform the ruelles into a place as opposed to a derelict through fare. To improve the quality of the existing space, a method was developed based on the surrounding context of the neighbourhood. The analysis carefully took the important elements that make the Plateau a unique and desirable place, and used them to inform the design of the ruelles. The primary output of this analysis led to a map of the existing site conditions of the typical Plateau block. Clear zones emerged from the existing site conditions, and are common to almost all Plateau blocks.

The design for this proposal reinterpreted these zones, and applied them to the lane and the rear of existing properties. From this process, 10 key principles emerged that were used to guide the initial trial design. Those principles took into account the heights and widths of existing properties, the existing uses of the ruelles, the incorporation of utilities into the lane, how the ruelle could be accessed and so on. Also six lane building types were designed to meet the tight spatial constraints of the ruelles of the Plateau. The programmatic ruelle zones, the 10 design principles and the six building types became the core elements of the methodology.

Several ruelles throughout the neighbourhood were used to test the methodology. One block was fully developed to include all aspects of the methodology, and others were conceptually developed to show the viability of the method. The results showed that it is indeed possible to create a new place in the laneways of the Plateau.

Although the initial question of whether a methodology could improve the existing states of the lanes in the Plateau proved to be possible, several other questions emerged through the design process.

Could this method be applied to most ruelles in the Plateau? As mentioned, several blocks were selected to prove test the methodology, and proved to be successful. Even atypical blocks could benefit from some form of the method with modifications to the

original design principles. Either they can be developed without built interventions, or with pedestrian access only as some of the existing Ruelles Vertes. Although the methodology is seemingly rigid, it can be loosened to allow for more spontaneous developments. For example, the design for the atypical block that was explored included a inner-block park, as well as backyards for the lane intervention buildings. These types of allowances occur on the main street, such as uncommon row house clad in Greek tiles, or a vibrantly painted mural on the side of a shop. These anomalies contribute to the unique character of the place, and help make the Plateau such a vibrant neighbourhood.

Could this proposal actually become a reality in the Plateau or even in other Montreal neighbourhoods? There is evidence that the residents of the Plateau want to improve the space behind their dwellings. There are over 44 Ruelles Vertes throughout the Plateau, and 15 more are planned for the summer season of 2015. With this support from the local community, further development of the lanes is a definite option. Currently, the issue that stands in the way of architectural interventions in the lane is current zoning and by-laws in Montreal. Vancouver has recently started to allow for laneway housing by incorporating specific rules and guidelines into their zoning bylaws. In Toronto, The Laneway Project, an initiative that strives to improve the city's relationship with it's laneways recently published a 'how-to' guide for laneway developments, which outlines exactly what is permitted within the current zoning by-laws. Documents like this are available to the public, and truly start the conversation of what is possible for the laneways. Precedents have been set in other Canadian cities, and for this proposition to become a reality, similar actions need to happen to allow for lane development in Montreal.

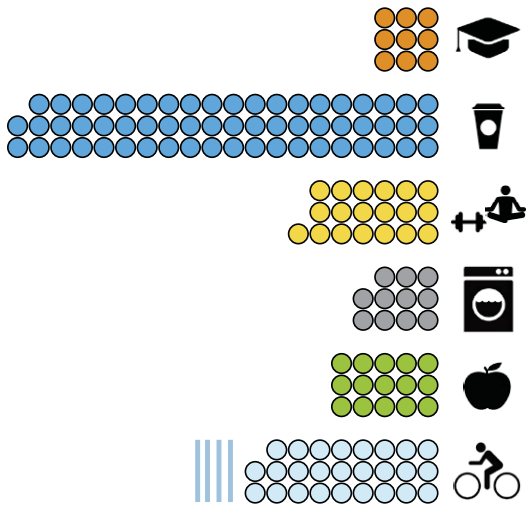
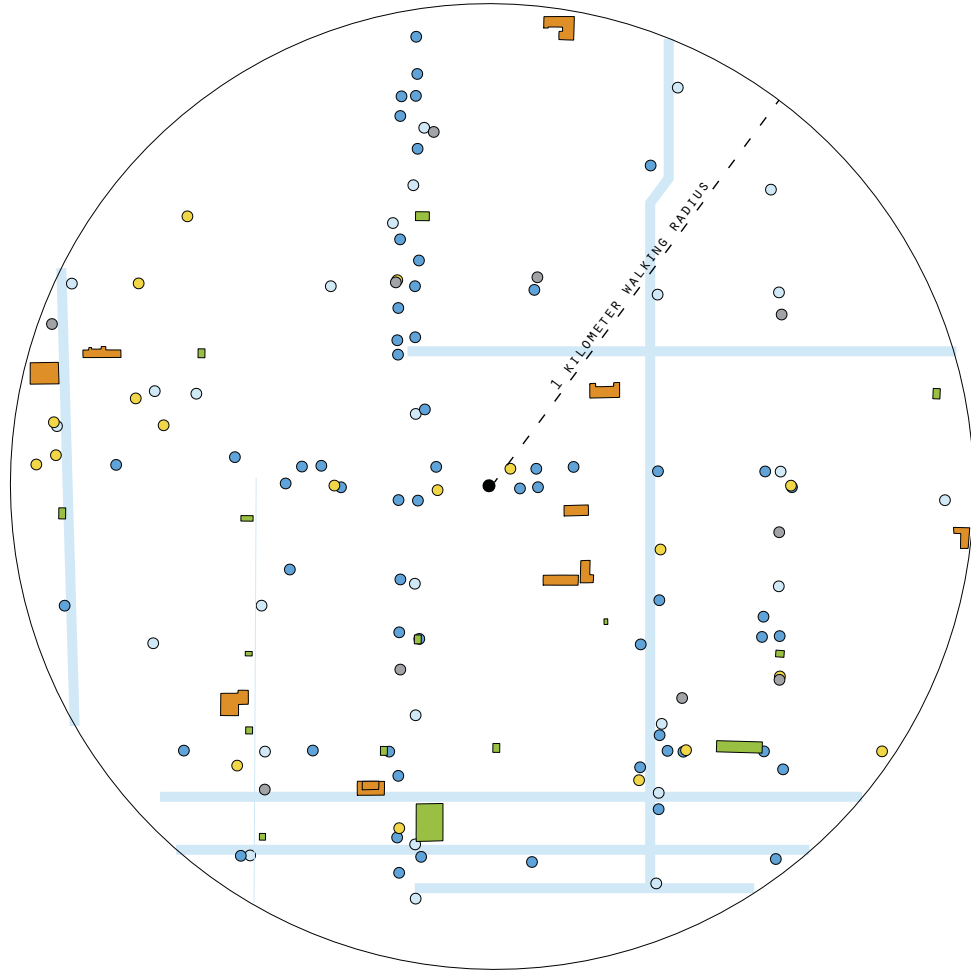
The goal of this project truly was to illustrate what could be done with the current states of the ruelles in the Plateau. This is one proposition that shows how a methodology could be applied to the lane in order to transform them into a unique place within a already vibrant neighbourhood.



Figure 44 and 45: Initial ideas of what the ruelles could become: a swimming pool or a park

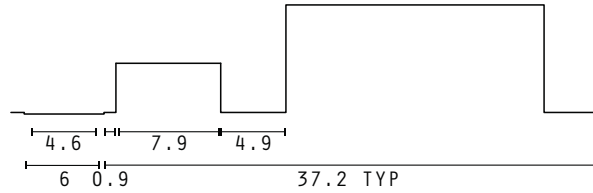
APPENDIX

1 Kilometre Radius Amenities Study of the Plateau

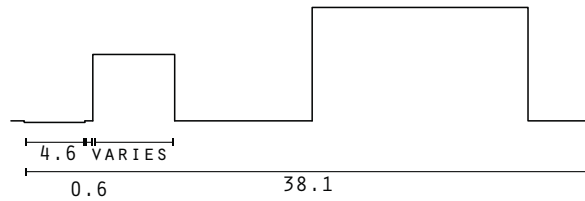


Canadian Laneway Precedents

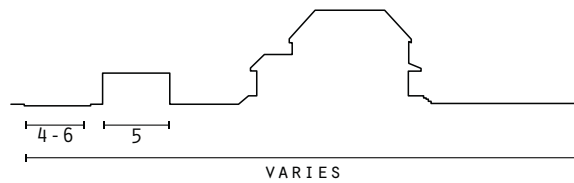
Vancouver
 Currently has zoning
 by-laws allowing for
 laneway housing (over
 500 examples)



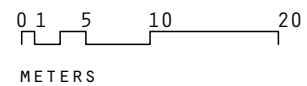
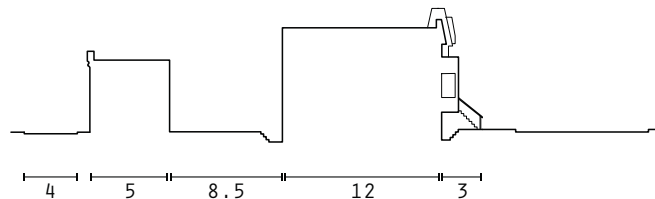
Calgary
 Currently allows
 lane way homes
 in some inner-city
 neighbourhoods



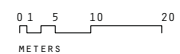
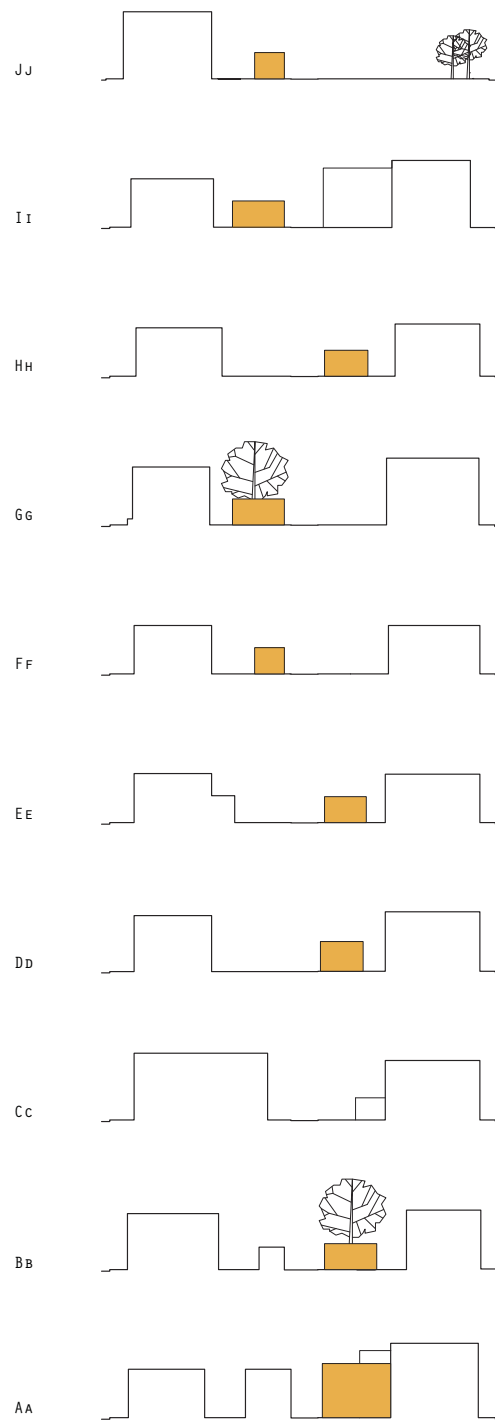
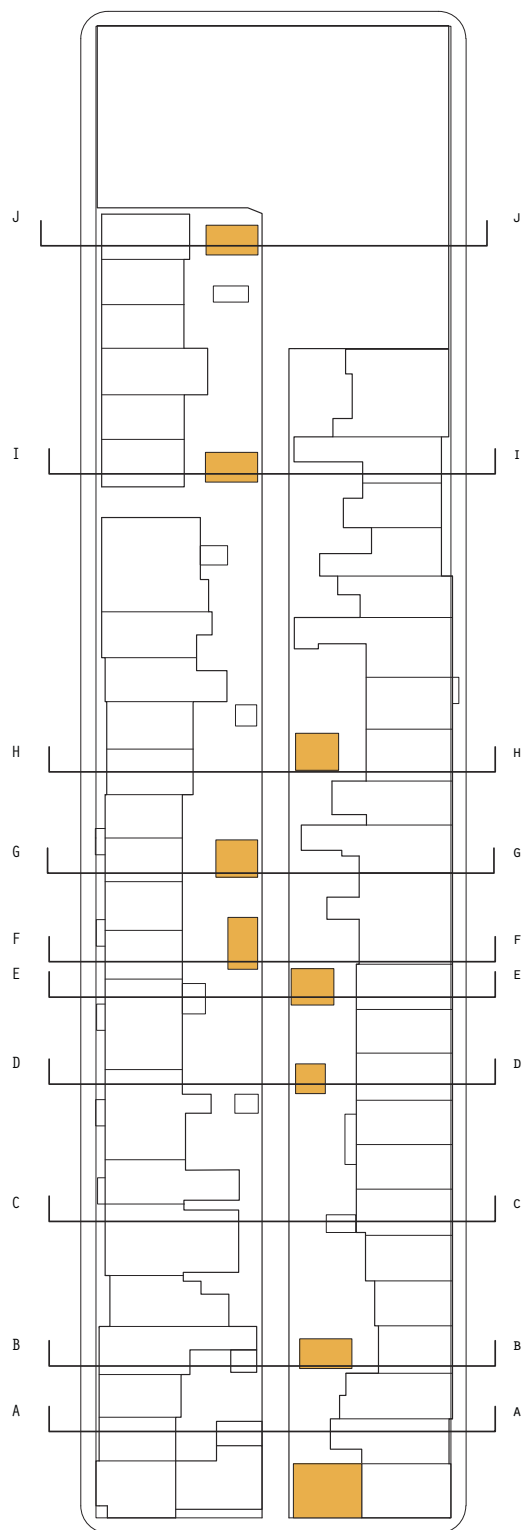
Toronto
 Several lane way
 Homes, mostly
 architect-designed



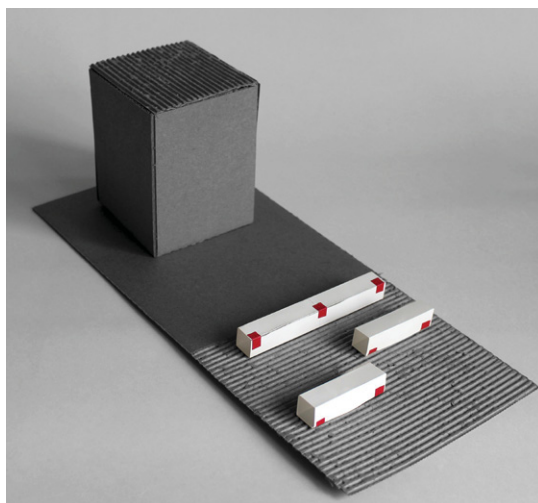
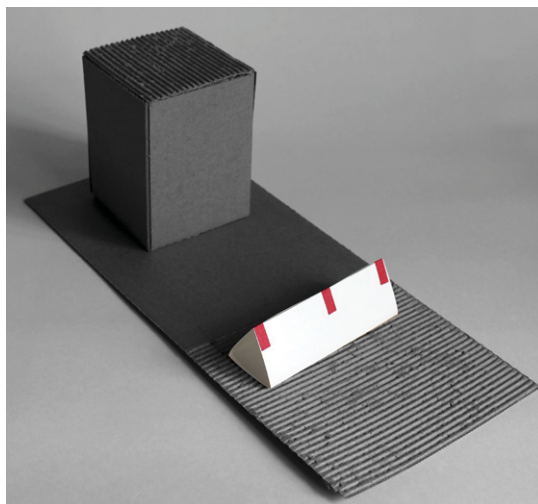
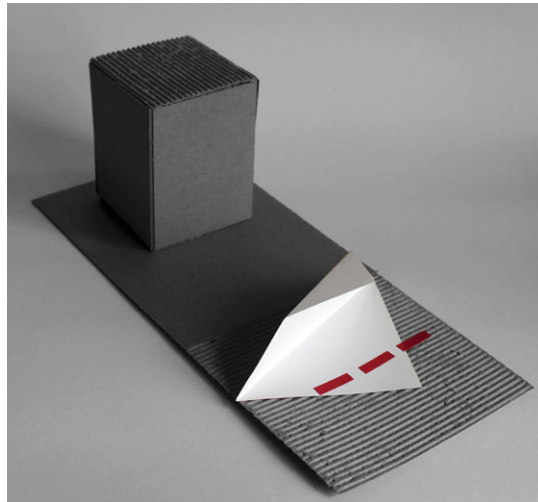
Montreal
 Example of existing
 coach house in the
 Plateau Mont-Royal



Test Fit Study



Early Lane Study Models



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