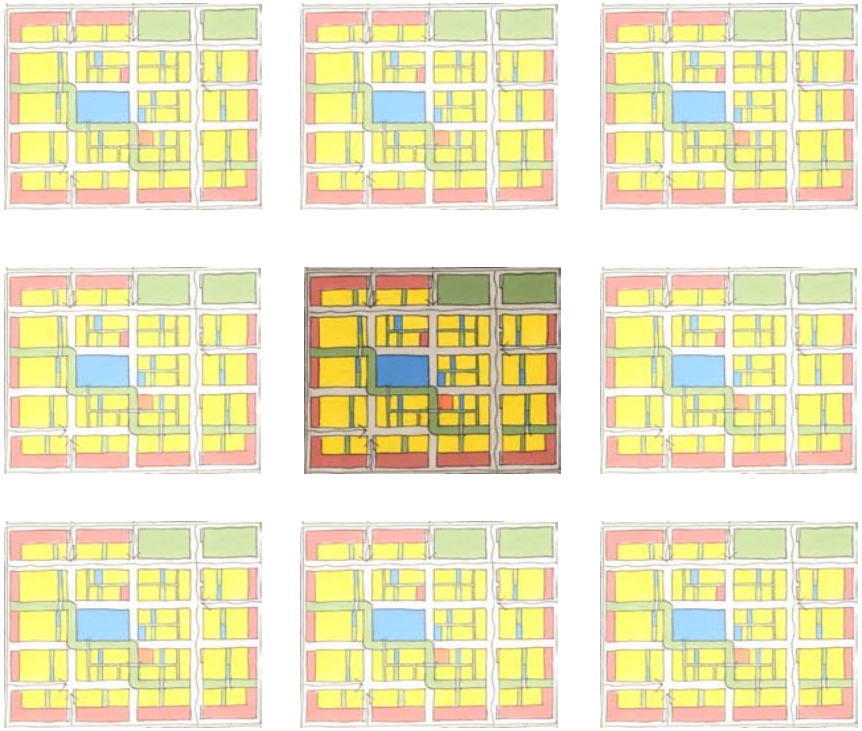
B.3 **Kitsilano "House" District**



The district as a whole unto itself, and as a part of the greater multi-district or regional whole.

District Concept
The district is conceived as a relatively self-contained unit. Except for the regional systems of transportation, potable water supply, hard waste, and energy supply (at 50%), the district functions as a functional unit that comprises a sustainable whole – providing opportunities for its residents to live, work and play.

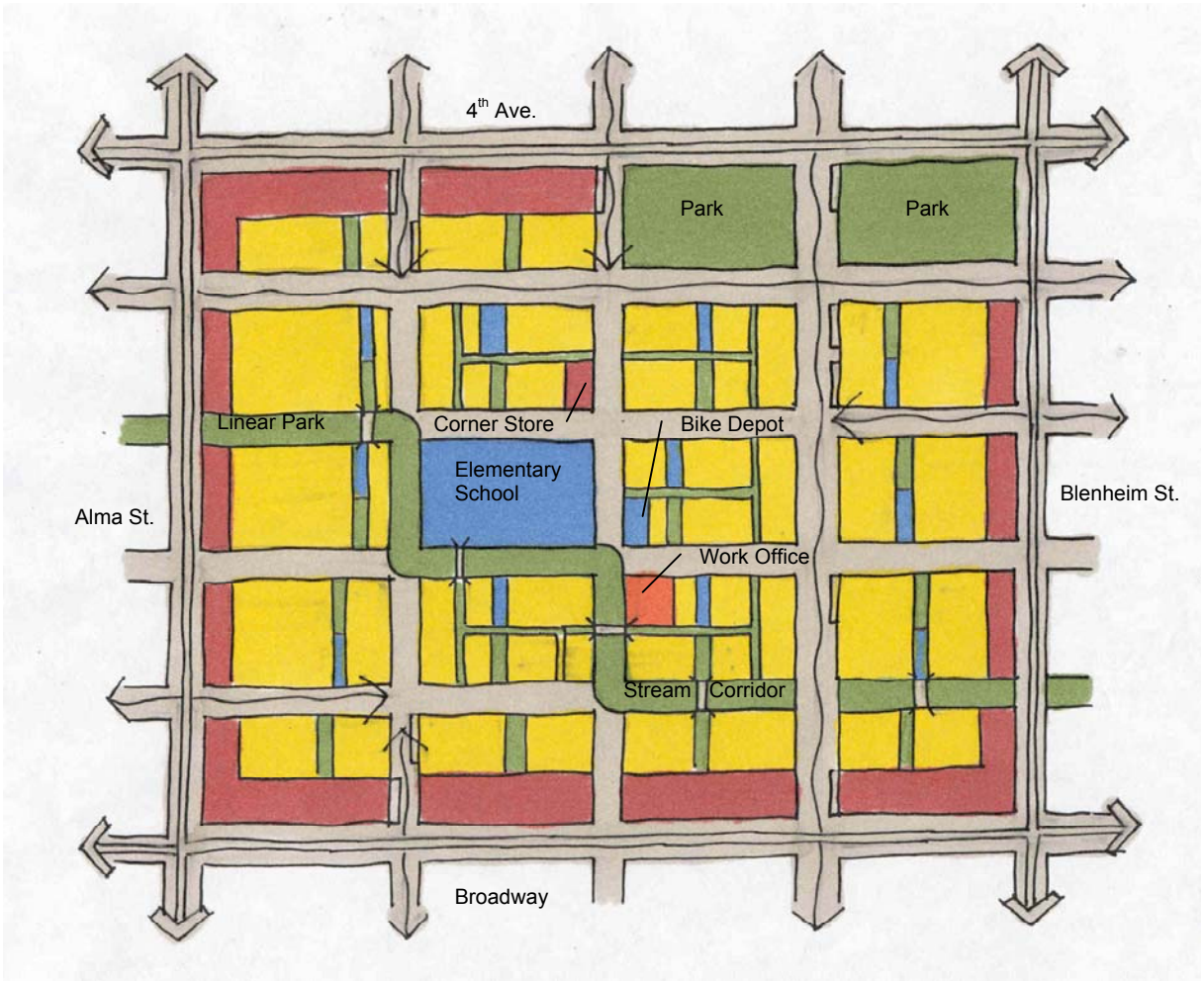
The district has a strong edge condition of transit and commercial development (as mixed-use zoning with residential). The district also has a strong central core, with the school or another main public facility at the centre of a pedestrian environment. The majority of district-organized food-production is located here, as is a neighbourhood work office. The result of a strong edge with a strong centre is a district, which focuses inward, yet stays connected to the region.

While this district formation has responded to the specifics of the site, it serves as a "stackable" model for conceiving land use patterns in adjacent districts.

District Targets and Solutions:
1. *Increase jobs at the neighbourhood scale.* Increase commercial development at district boundaries (red), and locate a neighbourhood work centre (orange).

2. *100% of dwelling units within 400m of basic shopping and amenities*. Residential area bordered by commercial on four sides.

3. *Density at 40 persons or more per hectare.* Infill in back yards and lanes no longer needed for car access and parking. Density at approximately 60 pph.



Land Use Diagram of Kitsilano "House" District in 100 years.
(Corridors with thick arrows indicate transit only; thin arrows indicate vehicle access; no arrows indicates pedestrian only.)

4. *100% of all organic waste being composted*. Compost used within the district on community garden plots, private gardens, in greenhouses, or "dug under."

5. *100% infiltration of runoff.* All runoff managed within the block, which feeds daylighted stream.

6. *At least one designated area within each neighbourhood for providing emergency services.* Elementary school.

7. *25% of land base (regionally) to be dedicated to parks.* Block-sized parks, pocket parks, and linear parks are located within this district.

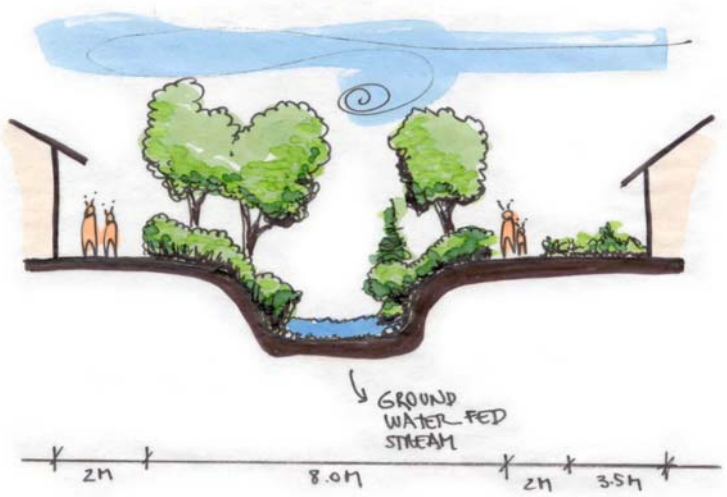
8. *100% regional corridors and riparian corridors to be protected.* Linear park protects daylighted stream corridor.

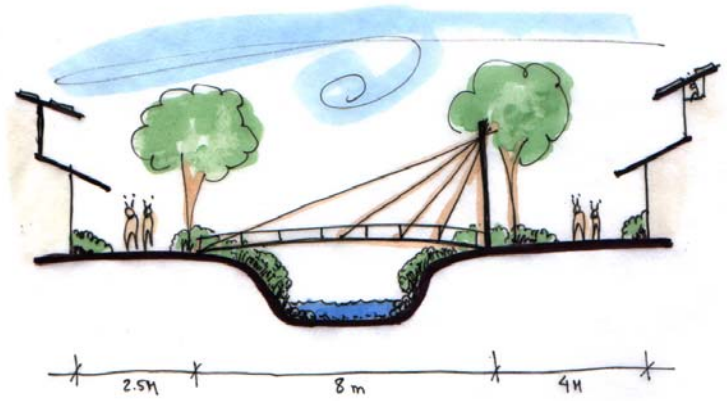
9. *50% of population involved in government priorities; 85% of the population active voters.* Redefine electoral boundaries to the district scale, and strengthen community ties within the district.

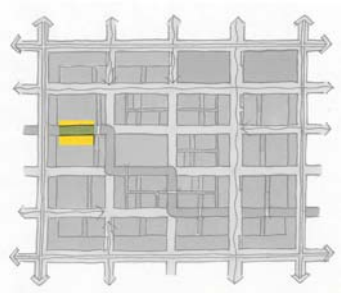
10. *Increase connectivity.* Walking: linear park, green lot connections, pedestrian-oriented streets. Transit: increased service, more local routes. Bike: district bike depots with free bikes to be used within an expanded district boundary; one bike depot per district.

11. *Restricted access for private vehicles.* Approximately 80% of streets closed to cars, but open to pedestrians, cyclists, emergency and service vehicles, and transit.

12. *100% of buildings that obtain at least 50% of their energy requirements from the land parcel or surrounding block.* The other 50% or less will come from regional energy sources, distributed by underground wires. Every several blocks will have an energy storage unit. Dispersing energy according to the need of each parcel.







Corridors

The streets in this site are divided in five different categories defined by hierarchy and type of use, they are:

- "Stream" Streets
- "Pedestrian" Streets
- "Car-Oriented" Streets, and
- "Transit" Streets

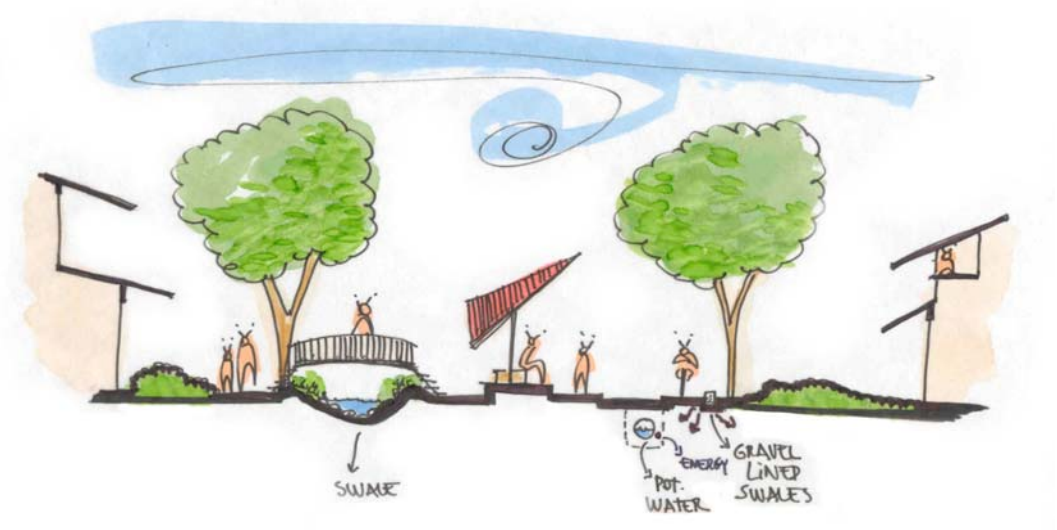
Stream Streets

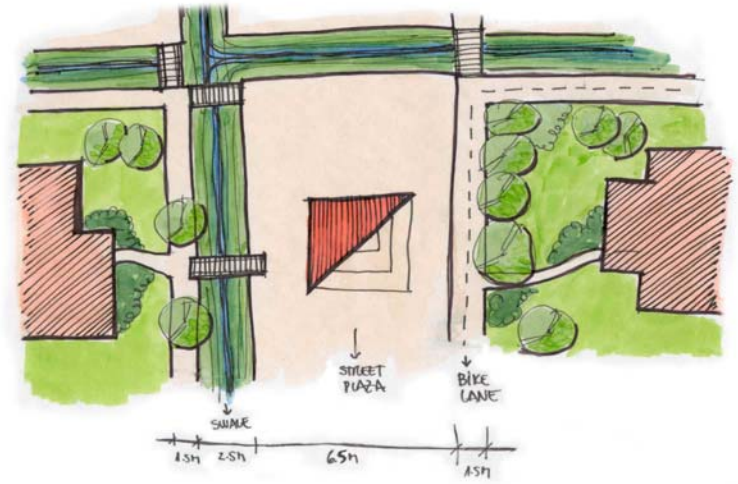
Considering that we have one stream passing through our site, there is a proposal for the typology of this street. It should be a place of contemplation, community interaction, as well as learning from the natural processes and the importance of taking care of this environment.

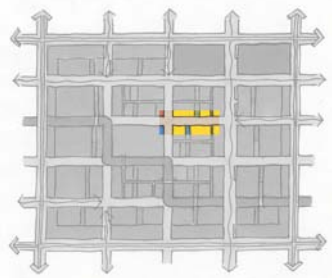
Targets and Solutions:

1. Increase to 100% of identified regional greenway corridors that are protected or preserved, including both recreation and ecological; greenway corridors by 2101;

2. 100% of length of buried streams within a municipality should be daylighted and restored.





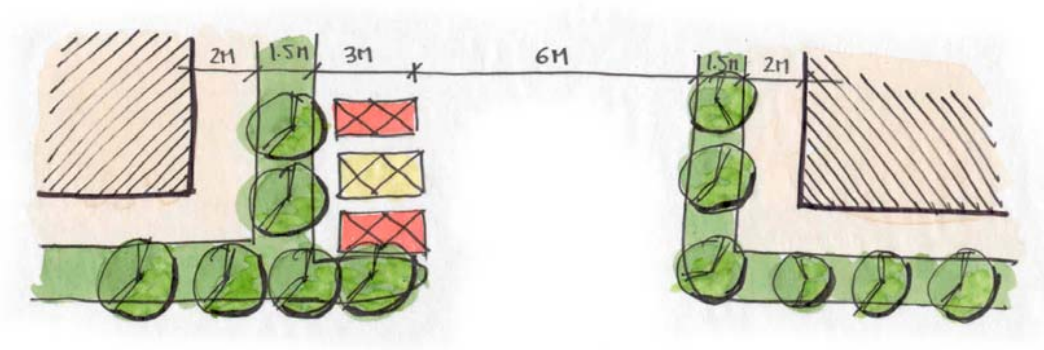


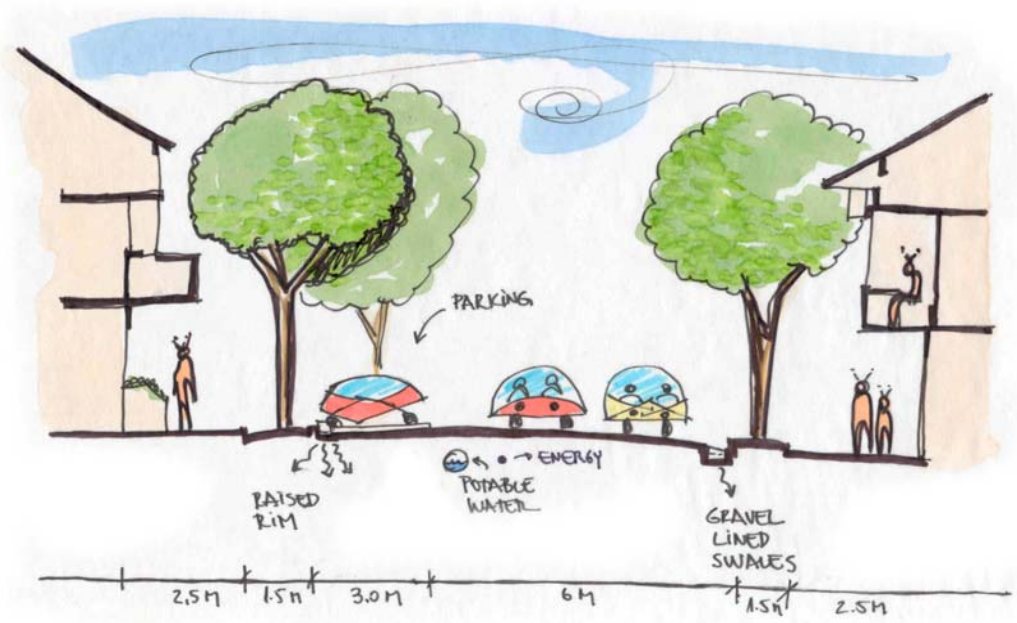
Pedestrian Streets
These are the streets that one-day accommodate the car traffic, now, with the reduction of the amount of car, as well as the need to use them, the community was able to turn some of those old streets into pedestrian streets. They are places to meet, to spend some time, walk, ride a bike, play, community meetings on a sunny day, and so on. Each one of the pedestrian streets has a swale to direct the stormwater flow to the main stream.

Targets and Solutions:
1. One or more public facilities within each block should be used for neighbourhood recreational or cultural events by 2021;

2. At least one public space in each block that have a significance work of public art produced by a local artist or craftsperson (the plaza would be opened for community interventions and artistic contributions);

3. By inducing the creation of a sense of community it would be possible to increase the number of citizens participating in processes involving identification of local government priorities.





Car-Oriented Streets
More commercial streets allow car traffic and parking. Those places should concentrate grocery stores, retail, and business, restaurants, theatres, and services. The parking will be in one side of the street, allowing two lanes of transit.

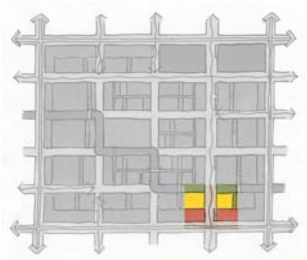
Targets and Solutions:
1. 100% of the dwelling units are located within 400m of basic shopping needs and personal services by 2101;

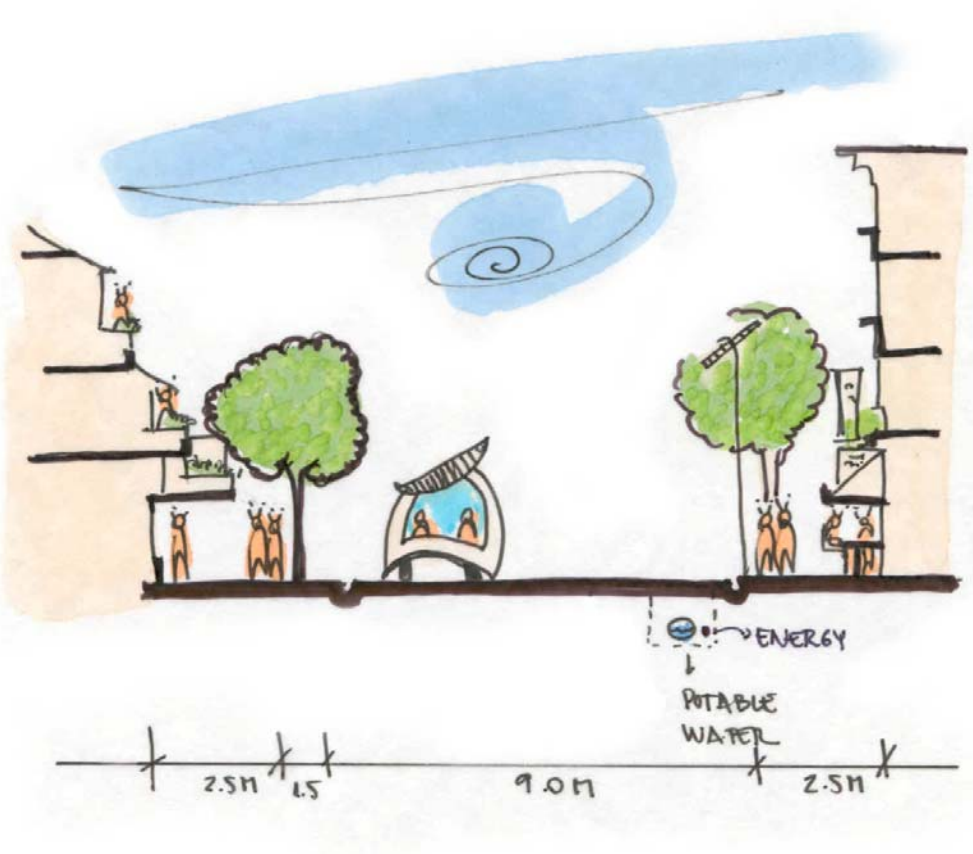
2. Community interaction would be increased by creating more pedestrian friendly streetscape;

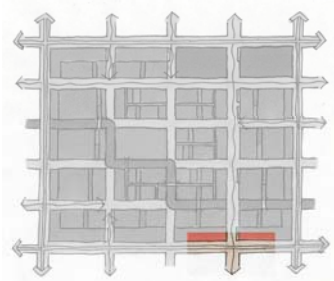
3. Building design should increase the “eyes on the street”, assuring safety and community interaction;

4. Limited use of cars, achieved by providing services close to the residences and efficient public and alternative transportation system;

5. Cars allowed only using renewable fuel source. New cars should be lighter, and smaller.







Transit Streets

Those are the regional connectors with other sites; they are specifically for public transit, not allowing the presence of personal cars. They will also concentrate the main commercial activity of the site, and connect the place with the region.

Targets and Solutions:

1. 100% of dwelling units that are located within 400m of basic shopping needs and personal services, by 2101;

2. Reducing CO2 emissions tonne per capita per year to less or equal to 1 by 2101;

3. 70% or greater of non-auto share in peak period;

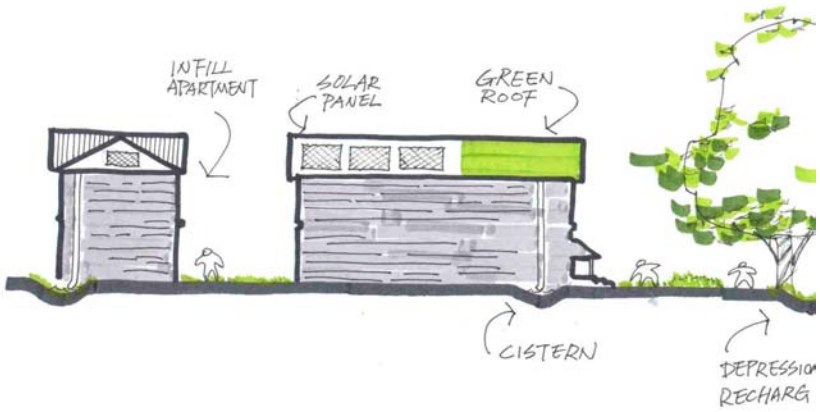
4. 80% or greater of non-auto share used for commuting;

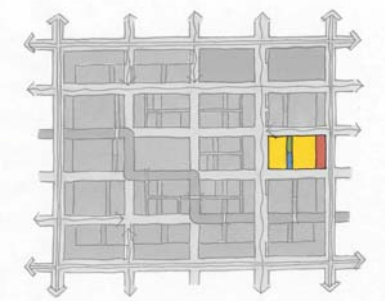
5. 90% or greater of non-auto share travelling to, from, and within the Metropolitan Core within peak period;

6. 90% or greater of dwellings located within 350m of a transit stop or collector bus;

7. Covered and connected walkways;
8. Increase density;

9. Design of buildings based on human scale, more pedestrian friendly.





Blocks
There are three main block conditions in the district: Residential Infill, Greenhouse Infill, and Public Facilities.

Block Targets and Solutions – Residential Infill

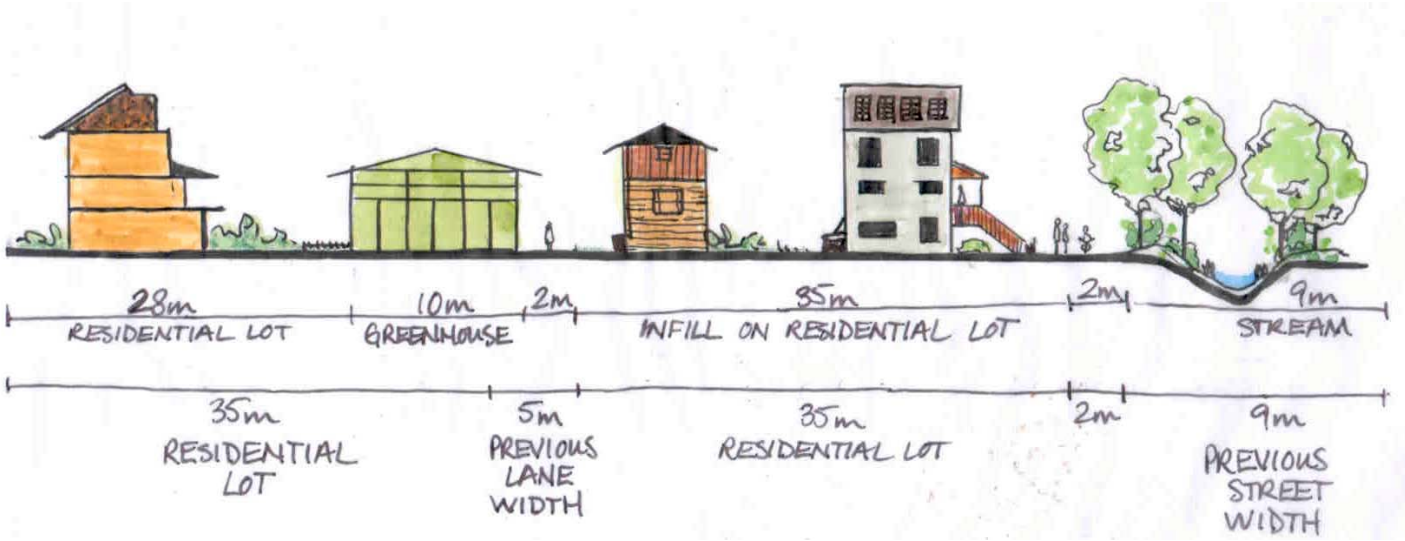
1. *Density* of *more than 40 persons per hectare.* Infill in back yards, lanes and garages, while keeping access for pedestrians and services.

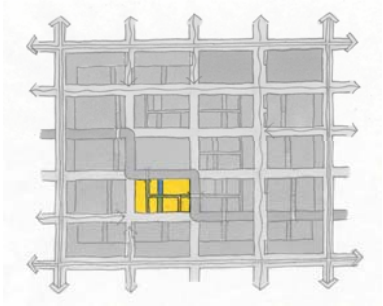
2. *100% of dwelling units within 400m of basic shopping and amenities.* Blocks close to the edges of the district are more densified and have high access to commercials at the borders.

3. *50% of population participating in processes involving identification of local government priorities*. Re-define the scale of "local"-municipal government down to "block" level, having representatives from every block.

4. *100% of buildings that obtain at least 50% of their energy requirements from the land parcel or surrounding block.* Alternative energy creation at the parcel-block level: Solar voltaic, bio-gas and geo-thermal.

5. *More than 30% affordable residential units*. Mixed types of homes/apartments, SFH / MFH, rent/own, mixed sizes of lots and homes, tax incentives to work from home.



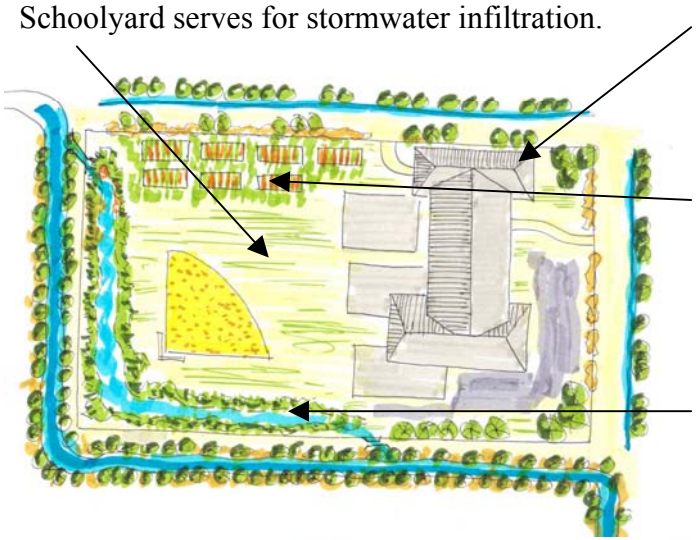


Block Targets and Solutions – Greenhouse Infill

1. *More than 20% of food that each neighbourhood consumes annually that is produced within the neighbourhood.* Encourage community gardens and infill greenhouses (backlanes).

2. *100% of all organic waste being composted.* Creation of on-site composting facility integrated with a compost demonstration garden, implementation of user-pay strategies, extension of "blue-box" recycling to all multi-unit buildings and can be composted to be soil amended given/sold back to urban agriculture/ community gardens.

3. *100% of rain falling on block infiltrating into the ground or collected for reuse*. Decreasing the paved areas and increasing the green open spaces.



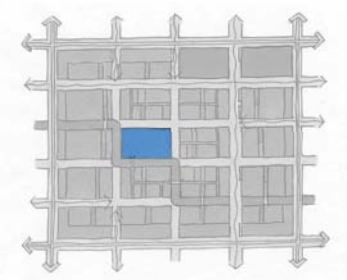
School facilities are shared by residents during different time of weekdays and holidays.

Community Gardens are built as a soft edge of the school site along the pedestrian street, supplying food for the neighbourhood as well as educational opportunities.

Swale provides a soft edge to the school site along the stream corridor, serving for filtering of greywater.

Section of the soft edge along stream corridor.

Section of the soft edge along pedestrian streets.



Public Facility - School Site Targets and Solutions:

The public facility block – in this case an elementary school – is a site layered with uses. The intent is to combine education, recreation, community building, and environmental activities and functions on one block in a way that uses space efficiently. To this end, a program for this block structures use throughout the day, evening, and weekend, and brings together in one place all members of the district.

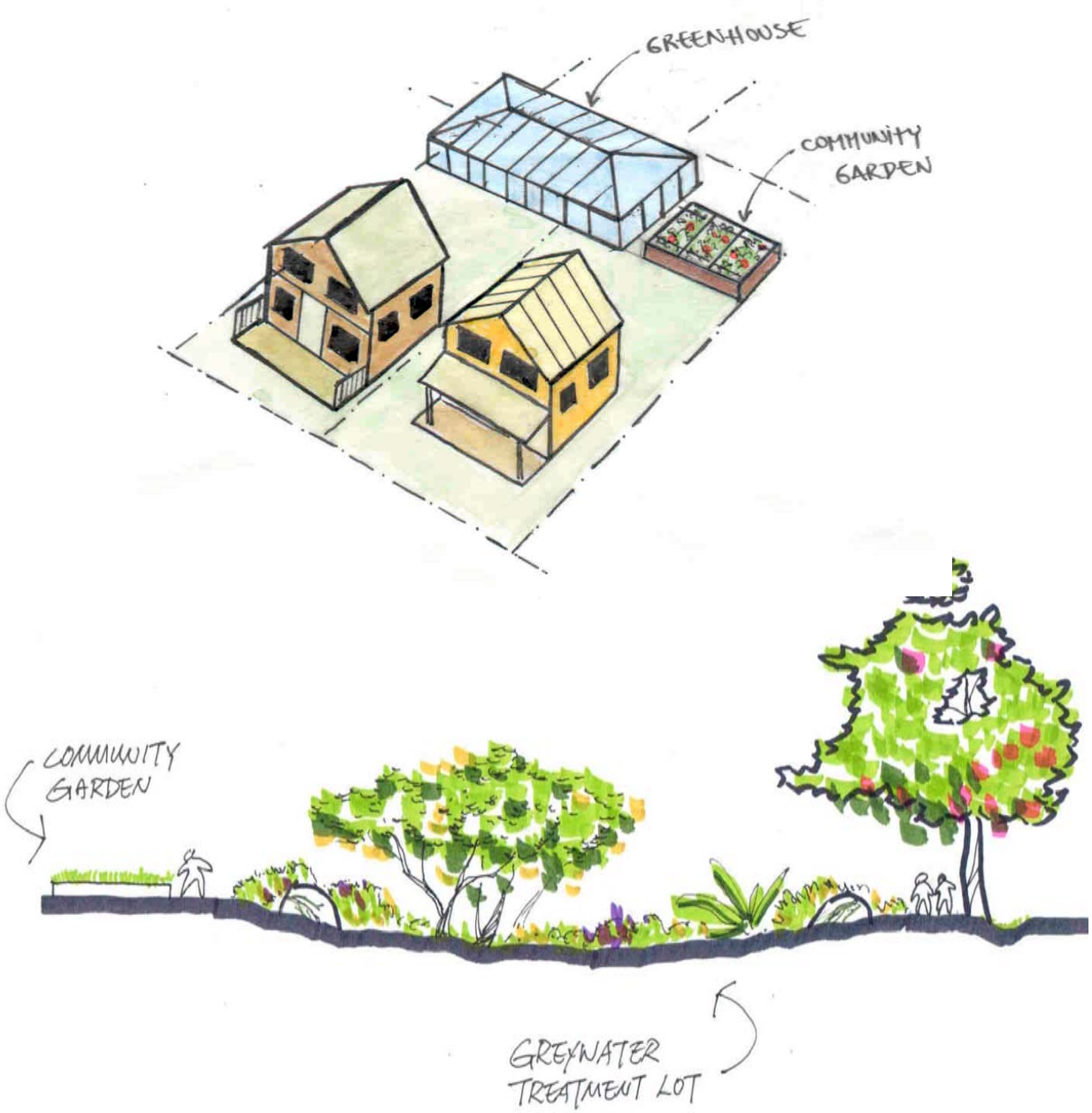
1. *School facilities are used for neighbourhood recreational and cultural events, and as an evening and weekend community centre*. This can be achieved by having public access to the school facilities when they are not used by students.

2. A portion of the food that each neighbourhood consumes is produced by the educational gardens located within the school.

3. The school is designated as an emergency shelter disaster response centre.

4. *100% of rain falling on the school site infiltrates into the ground, with additional collection of rainwater for reuse*. This can be achieved by a permeable school yard, cisterns, and rain barrels.

5. Greywater treatment occurs at the schools edge, providing further educational opportunities and supporting stream base flow.

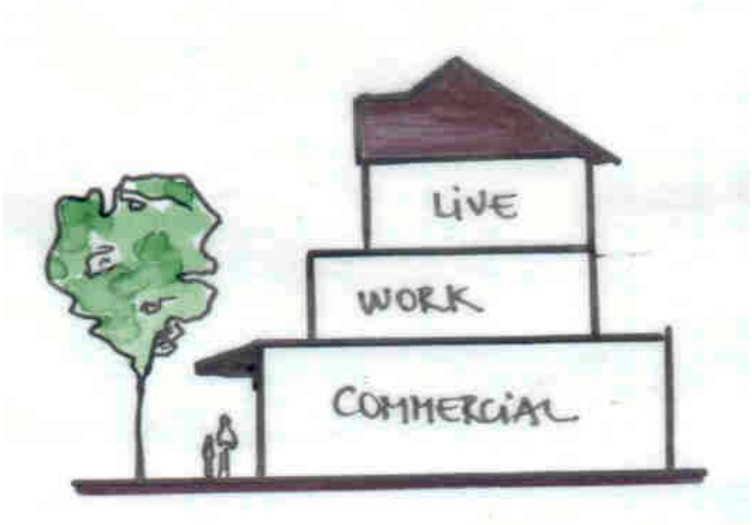


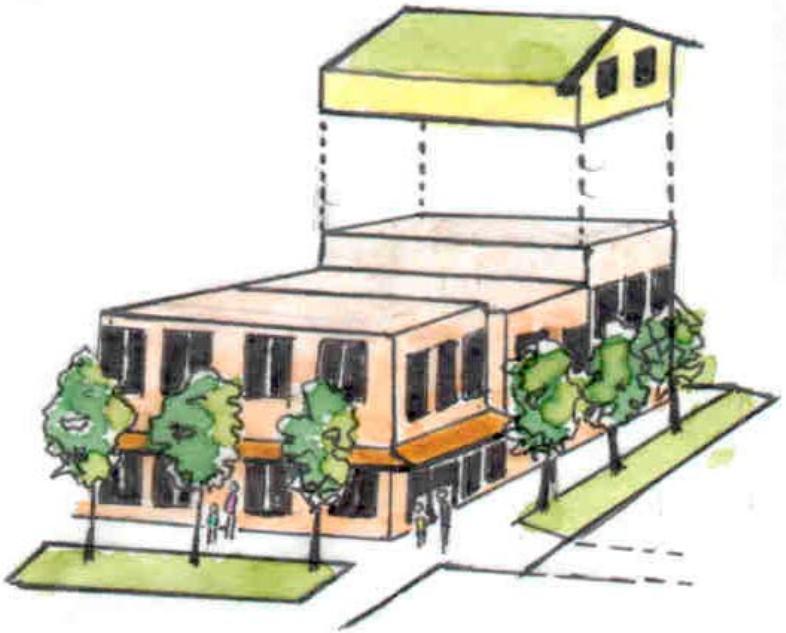
Parcels
Parcels are structured to allow for infill and for private and public functions. Three parcel described here are: Greenhouse/Community Garden Parcel, Commercial Mixed-Use Parcel, and "Green Lot/Public Lot."

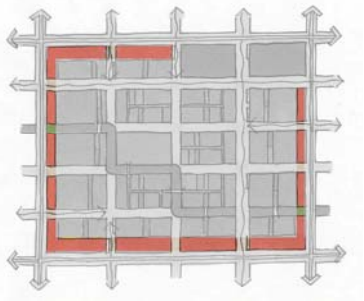
Parcel Targets and Solutions – Greenhouse/Community Garden Parcel

1. *More than 65% of roof area of buildings that are vegetated and designed to support plant life.* Tax incentives for retrofitting.

2. More than *20% of food that each neighbourhood consumes annually that is produced within the neighbourhood.* Urban agriculture (household scale) and higher tax incentives if roof is food producing (rooftop gardens).







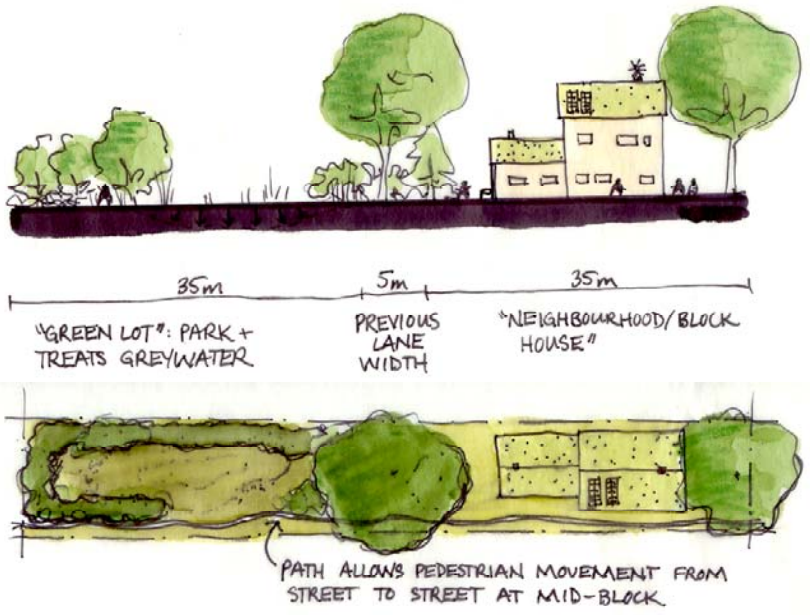
Parcel Targets and Solutions – Commercial Mixed-Use Parcel

1. *100% of dwelling units within 400m of basic shopping and amenities.* Increase in commercial development will provide the increase in employment positions within neighbourhoods. More commercial space can fit into existing neighbourhoods through infill and mixed-used zoning.

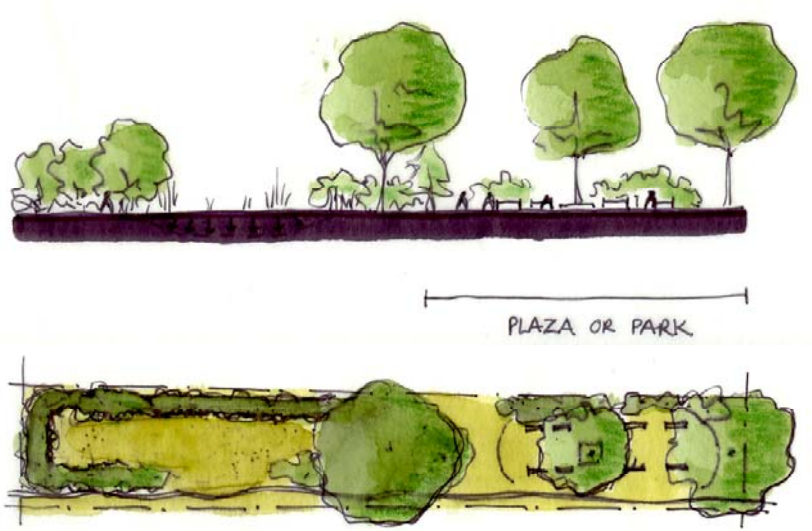
2. *Buildings present a friendly face to the street.* Commercial Building entrances directly at the sidewalk within a few steps of transit.

3. *20% of businesses that are either a: 1) provider or exporter of green, clean technologies or services, or 2) CED operation.* Set policies to require the targets.

4. *Density increased to more than 40 persons per hectare.* Residential infill atop commercial buildings assists in the achievement of approximately 60 persons per hectare.



"Green Lot and Public Lot" Above: Condition #1 with "green lot" and "block house." Below: Condition #2 with plaza or park instead of a "block house."



Parcel Targets and Solutions – "Green Lot" and "Public Lot"

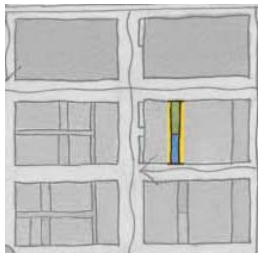
1. *Include at least 1 public facility within each block that is used for neighbourhood recreational or cultural events.* The facility takes the form of either a building or an outdoor space, and is strengthened by having a green lot adjoining.

2. *Provide for at least 1 public space in each block that has a significant work of public art produced by a local artist or craftsperson.* This public area provides space for such a work.

3. *100% infiltration of runoff.* Lots infiltrate runoff for own area, with capacity for runoff from adjacent lots.

4. *100% onsite treatment of wastewater.* Green lot treats greywater from block.

5. *25% of land base (regionally) to be dedicated to parks.* Green lot contributes to this percentage, and ensures that park space is distributed throughout districts as well as throughout the region.



Methods

As a collective of three smaller groups, the Vancouver Team agreed on certain technological and sociological guidelines and visions for the future of the Vancouver region. We envisioned a Vancouver 100 years from now which kept much of the spatial framework that the city works with at present, but focused on sustainable systems and lifestyles. This saved the group from apocalyptic visions, philosophical disagreements and the difficulty of imagining and planning for a future wholly different from life as we know it.

Beyond these basic agreements it was understood the three smaller groups – representing three different neighbourhood structures - would address the sustainability targets collectively agreed upon in ways appropriate to the specifics of site. The over-arching goal of the groups was not to design a model that would fit any Vancouver neighbourhood, but instead to address each site's unique attributes in order to craft possible solutions. The hope was that in presenting varied versions of Vancouver's sustainable future we would provide a more provoking platform for discussion as the strengths and weaknesses of each vision can be directly compared.
The Vancouver Team utilized target information from Sheltair, adopting most of the targets and amending the rest. The smaller groups drew heavily on the work from the previous two projects to achieve a coordinated synthesis of sustainable systems for each site. In thinking about sustainability not simply as isolated issues of transportation, socio-economics, or infrastructure, but rather as the whole of the urban fabric, the vision developed in the previous projects was expanded. The decentralisation of urban infrastructure, and even of urban life, is seen as a key to sustainability. A diversified and complete neighbourhood offering environments to live, work and play provides a vision of sustainability that retains the themes of liveability that are so valued today.

A multiplicity of visions means there are many possible solutions and many possible paths that can take Vancouver to a sustainable future. The final requirement is political impetus, which we can only hope that reports such as this will stimulate through the presentation of a necessary, desirable, and workable future.

PROBLEMS & CONTRADICTIONS

Heritage - Very little discussion was given over to cultural sustainability and preserving the city's heritage.

Water Supply - While the groups support light, decentralised infrastructure, we could envision no way to disconnect neighbourhoods from the regional provision of safe, potable water.

Technology - The groups found themselves regularly assuming technologies – that is, assuming they would be invented or assuming they would work like we imagined. The 100 year projection and a limited understanding of even available technologies made such assumptions unavoidable.

Standing Water – While natural drainage is good for ground water recharge, isn't the possibility of standing water a concern for human health?