

# The River Hub: PATTERNS OF WORK

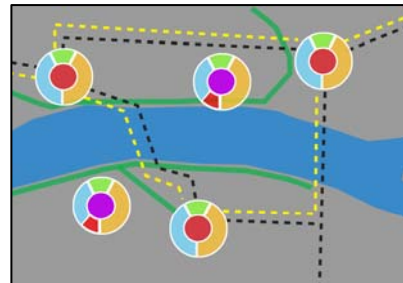
## A Diversity of Opportunities

When a diverse range of employment opportunities are concentrated in town centres and along main corridors there are many benefits: activity and synergy between businesses are enhanced; diverse land uses make the town centres and main corridors viable and adaptable to change; the centres are well connected and serviced by efficient transportation and transit routes, so people can get to work easily; and the variety of opportunities and services attract a wide range of people to live in the areas close to where they work. Overall these areas thrive with activity and have a sense of vitality that is always appreciated in a community.

On a regional scale, a range of well connected town centres creates even more diversity and employment opportunities. While at a local level, diversity within a centre or along a main street allows people in the community to live, work, socialize, recreate, and meet all their needs close to home. Specifically, it is recommended that land use within a centre be shared such that 10-15% is public space, 30-70% is for commercial activity, and 30-70% is residential.

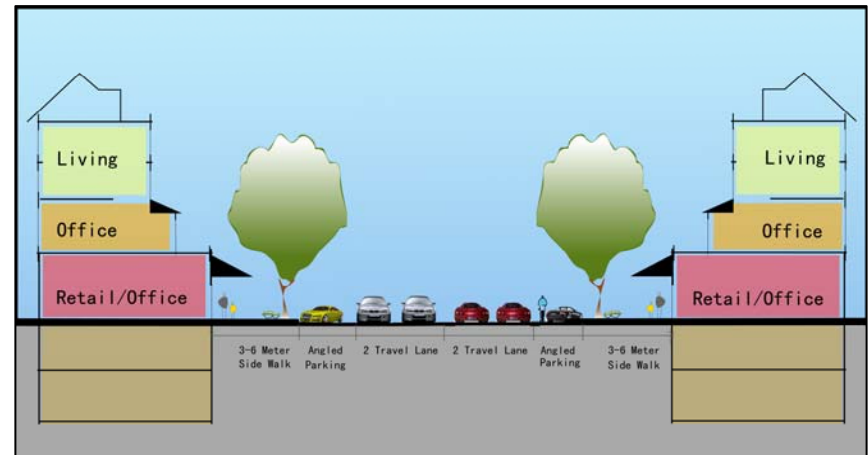
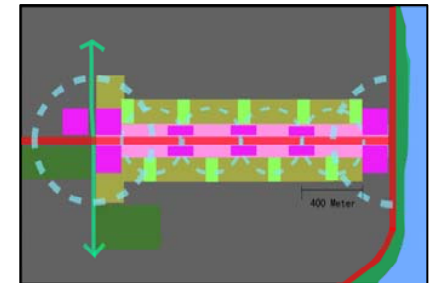
### Integrate the centres:

Within centres integrate a range of employment opportunities, while also connecting the different town centres.



### Create mixed-use corridors:

Along main corridors provide a range of employment opportunities, services, open space, and housing options.



### Create diverse main streets:

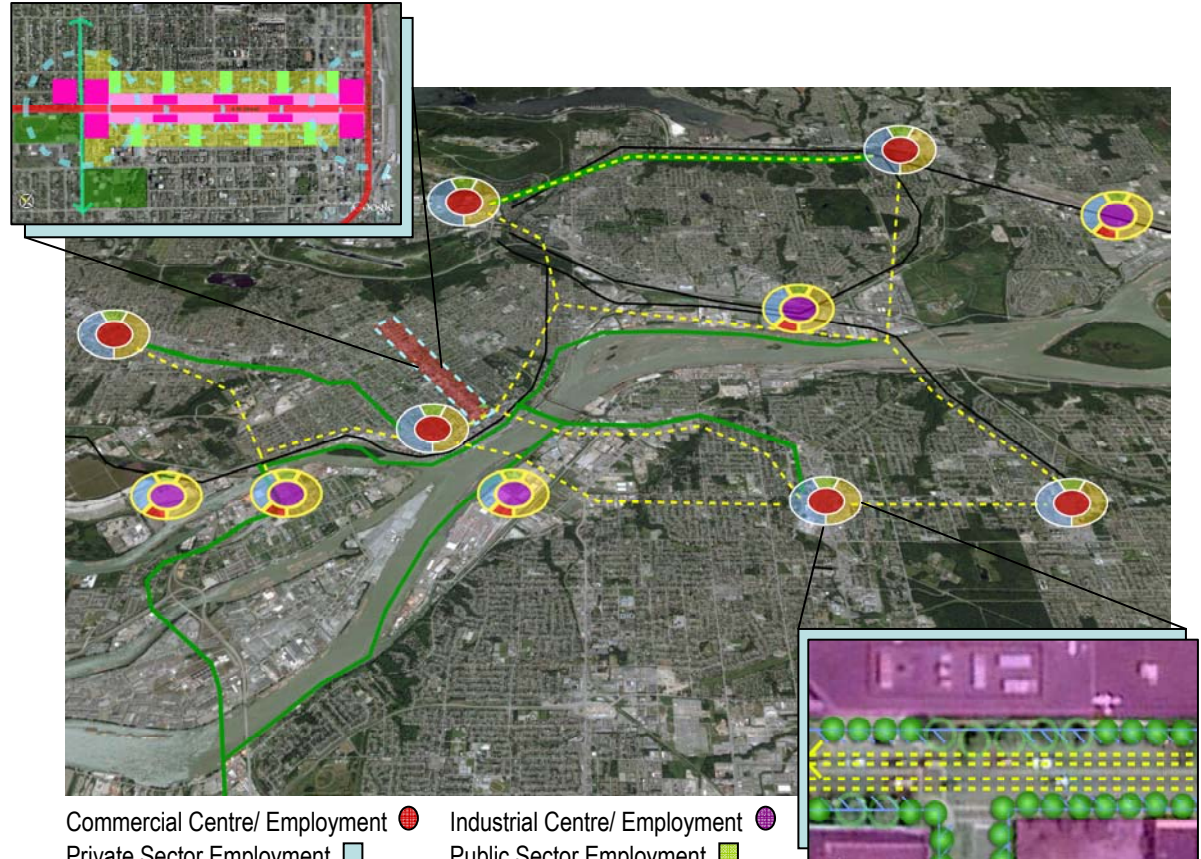
Along a main street encourage a range of employment and the opportunity to live close to work by including commercial retail space, office space, live/work space, and high-density residential.

# The River Hub: PATTERNS OF WORK

## Viable and Vibrant Centres

There is already a range of centres and corridors in this area that are focused around commercial or industrial activity. However, not all of them are very diverse. Industrial areas tend to be separate from commercial and residential areas. By adding more diversity to these centres they become viable and attractive to new residents. For example, a factory worker might choose to live in a centre where he or she can walk to work, do the shopping, socialize with friends, take the children to school, visit a community centre, and easily hop on transit to visit other parts of the region.

Often a centre is defined by a main street where there is concentrated activity. The top left image is a good example of this in New Westminster where 6<sup>th</sup> St. meets Columbia St. In Surrey, 104 Ave. is a main street, but currently it is not very diverse and people need a car to access the businesses. It has the potential to become a more diverse and active main street by: moving parking underground and allowing wide continuous sidewalks, creating street parking, encouraging a wide range of commercial activity, and providing high-density housing.



### Diverse centres and corridors:

Employment is centered around industrial and commercial areas, which are also well connected by transit and transportation routes. Within each centre job opportunities range from private sector retail and business, to public sector employment. High-density housing is also concentrated in these areas, so people have the choice to live where they work.

# The River Hub: PATTERNS OF NATURE

## Preserving and Utilizing Streams

Watersheds and streams are the backbone of ecological networks and one important goal of green infrastructure systems is to preserve and enhance the natural functions of waterways.

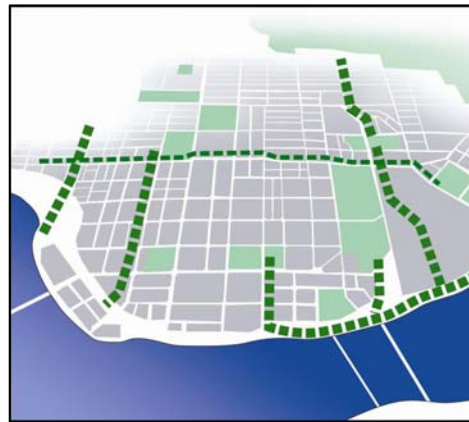
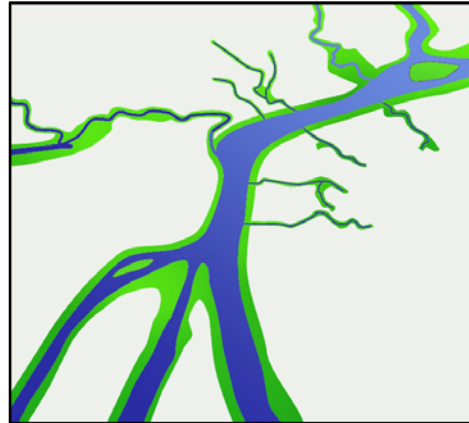
In urban areas rivers and streams can be protected by creating buffers along their edges. A buffer of vegetation helps maintain water temperature, provides habitat, acts as a corridor for wildlife movement, and intercepts and infiltrates runoff. In addition, a buffer can serve as a greenway for pedestrians and cyclists thereby providing recreational and educational opportunities.

Connected to the buffers, greenways are linear open spaces and green infrastructure that connect to other natural features and parks. Greenways also play an important role in the movement of wildlife, people, and storm water.

Finally, in addition to buffers and greenways, site scale interventions can help protect the stream system. The amount of urban runoff can be decreased by using permeable surfaces, vegetation, and swales to infiltrate water on site instead of sending high discharges downstream.

### Create buffers:

Buffers along stream edges protect the water ways and also serve as important green corridors and recreation areas.

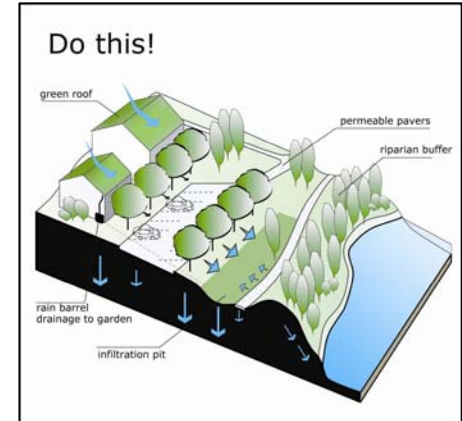


### Connect green space:

Greenways create an ecological network, provide habitat, infiltrate storm water, and offer recreational opportunities.

### Manage water flows (a):

Reduce urban storm water runoff to protect streams from pollutants and increased discharge rates.



### Manage water flows (b):

Reduce impervious surfaces by infiltrating storm water on site with green infrastructure.



## The River Hub - PATTERNS OF NATURE

### An Ecological Network

In this part of the region the Fraser River and its tributaries are increasingly threatened by urbanization, increased runoff, and pollution. A greenway system beginning with buffers along the waterways could play an important role in protecting one of BC's most important rivers. Currently some edges of the Fraser and other streams in the area have buffers, but they are not continuous. In many areas industry reaches right up to the river's edge. By shifting the industrial parcels back 30 m, a green buffer zone could serve as a major green corridor for wildlife and people.

Existing and proposed green corridors- such as tributaries with buffers and constructed greenways- could also connect with the Fraser's buffer zone to create an ecological network throughout the area. The green corridors would have to cross industrial lands to reach the Fraser, but this is an opportunity to reveal industrial landscapes and educate the public. Industry would no longer be an obstruction restricting public access to the riverfront.

On a site scale, green infrastructure and parks could also tie into this larger network. The lower right image portrays an area in New Westminster where street and site scale green infrastructure connect to and enhance the larger network.



#### *A connected ecological network:*

The network is strengthened by a variety of scales. The Fraser River with a buffer forms a region-wide green corridor, while smaller streams and greenways connect individual neighbourhoods. Within the neighbourhoods, other green infrastructure contributes to the network by infiltrating storm water.

# The River Hub: PATTERNS OF MOVEMENT

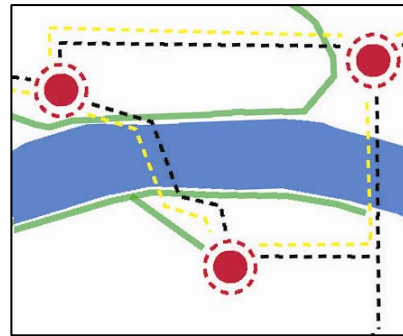
## Connections, Flows, and Alternatives

The movement of people around and through this area depends on connections, flows, and alternatives at all scales. At a regional level, efficient connections between the town centres is important to the 5 cities that converge in this hub of the Fraser River. People rely on these connections- whether by car, transit, bike, or on foot- to move between centres on a daily basis.

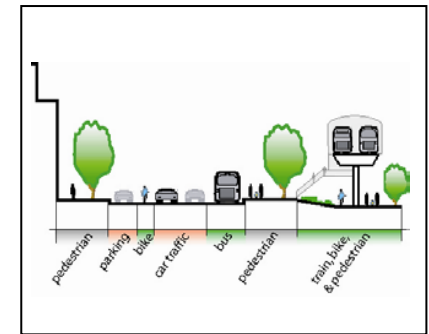
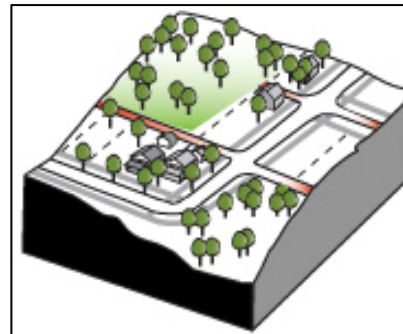
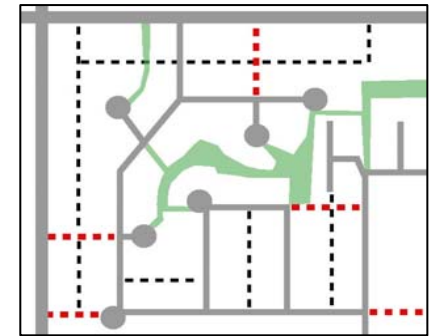
At a more local scale, connections within blocks play a role in how people move close to home. A block with many connections- whether they are roads, lanes, or greenways- will make frequent short trips more efficient and will often encourage people to use alternatives to driving, such as walking or biking. Related to this, lanes also contribute to flows at a block scale. Lanes allow for more continuous flows of pedestrians along sidewalks, improve private and service vehicle access to homes, and enhance public access to green spaces that might otherwise only be accessible by crossing private land.

Finally, at a street level, integrating the modes of movement along the major corridors utilizes these routes most efficiently and provides for a range in transportation options. This also provides the opportunity for people to combine modes of transportation such as: riding to the express line and putting your bike on the bus; or driving or walking and then taking the Sky Train.

*Connect the centres:*  
Allow movement between centres by greenways, transit, and vehicles.



*Connect the block:*  
Use lanes, new roads, and greenways to make connections within blocks.



*Enhance access and flows:*  
Use lanes to facilitate the flow of people and traffic, and to increase access to private parcels and public spaces.

*Connect the modes:*  
Provide for a range of transportation modes with multiple access points along key routes.



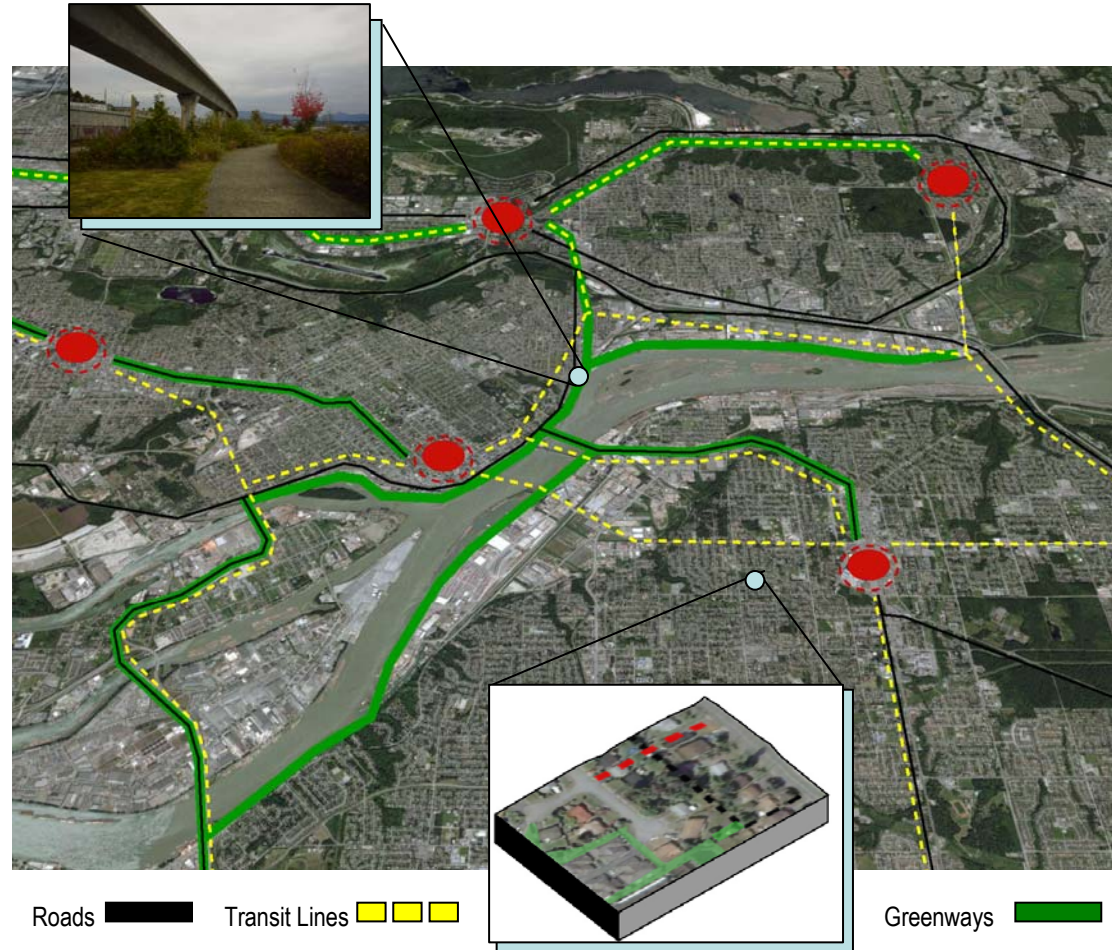
# The River Hub: PATTERNS OF MOVEMENT

## Obstacles and Opportunities

In this part of the region, the Fraser River might be perceived as an obstacle or an opportunity in terms of movement. For vehicle traffic the river is a definite challenge, it must be crossed via one of the 3 bridges, which inevitably become “bottlenecks” at peak hours. Alternatives such as buses, ride share programs, and car pools must also face this challenge. The Sky Bridge is the only other alternative. In response, HOV lanes could be made more continuous and robust over all 3 bridges and major routes, while more express lines that connect to the Sky Train might be added to encourage people to choose alternatives to driving their cars. This would reduce traffic congestion and enhance the flows.

On the other hand, the Fraser River also presents an opportunity to improve alternative modes of transportation. Already it is utilized for commercial shipping. Is there potential to also use this waterway to transport people via river taxis or a sea bus joining Surrey with downtown New Westminister?

Finally, the river is also an opportunity for greenway connections. Creating greenways along the river’s edge provides benefits on many levels: it creates a buffer, allows public to access the water front, and connects to other greenway systems.



*Connections and flows: now and in the future*

The connections shown are based on the current systems with further enhancements. For example, the above photo illustrates an integrated transportation corridor and greenway in New Westminister that is not yet complete along the river’s north edge. The transit lines shown here are also more robust than the existing system; connections have been added in the form of more express lines, more bridge crossings, and a fourth river crossing by sea bus.

# The River Hub: PATTERNS OF NEIGHBOURHOOD

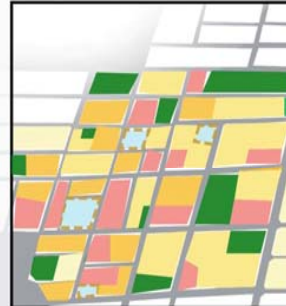
## Building for a Community

To enhance our neighbourhoods we must first recognize and work with the existing community. Physically this means working with existing residents to maintain and improve the places where they live and meet their daily needs. Where new construction occurs, whether residential or commercial, build on developed land first by retrofitting old buildings and infilling urban lots.

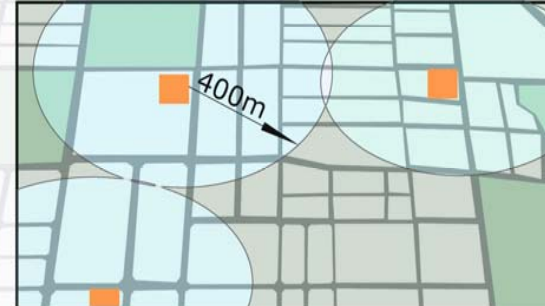
In addition to infill, use vacant urban lots to add an open public space to each block. This will ensure all residents have access to a place for socializing and recreation. Such a place does not require a lot of space and can take the form of a pocket park or plaza, community garden, or building such as a community kitchen or hall.

Finally, center the neighbourhood blocks around a larger common area. A social space such as a park, plaza, main street, or community centre provides many opportunities for community building. Such a place every 800m ensures that all residents are within a 10 minute walking distance from a social space.

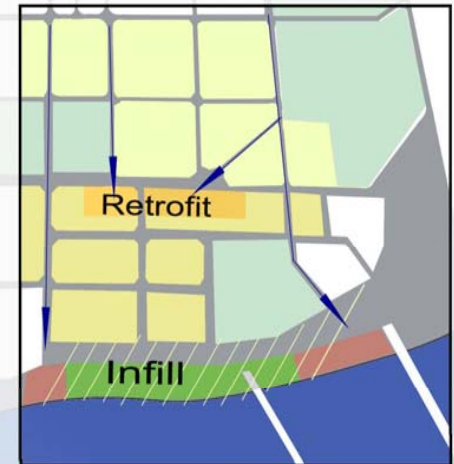
*Create flexible blocks:*  
Use a variety of land uses, housing densities, parcel sizes, and public space.



*Create neighbourhoods around a social space:*  
A neighbourhood centre within a 5-10 minute walking distance from resident is a place for people to gather, such as a park, plaza, main street, or community centre.



*Layer open space functions in each block :*  
Parks and plazas in each block ensures that all residents have access to a space that provides a place for socializing and recreation.



*Work with the existing community:*  
Build on existing developed land first while also preserving and working with existing residents.



# The River Hub: PATTERNS OF NEIGHBOURHOOD

## Opportunity in New Westminster

One example of neighbourhood building is already taking shape in New Westminster. Near the town centre of there is a large community. Density is high, therefore the need for access to open space and shared social areas is important. It is also important to work with existing residents and build for new growth on developed lands.

This image illustrates how neighbourhoods can be centered around social spaces. Where a residential area does not fall within the 400 m radius of a social space, they are within a 10 minute walking distance of the main commercial streets, which also are a type of social space.

As well, within most blocks some type of open space has been created. Finally, on a block scale there is a range of parcel sizes, commercial and residential land use, and open space or a social centre. This is shown in the lower right image, note the different types of open space and parcel sizes.



*A New Westminster neighbourhood:*

This example of neighbourhoods centered around social spaces and composed of flexible blocks can also be applied to other communities in the River Hub area.