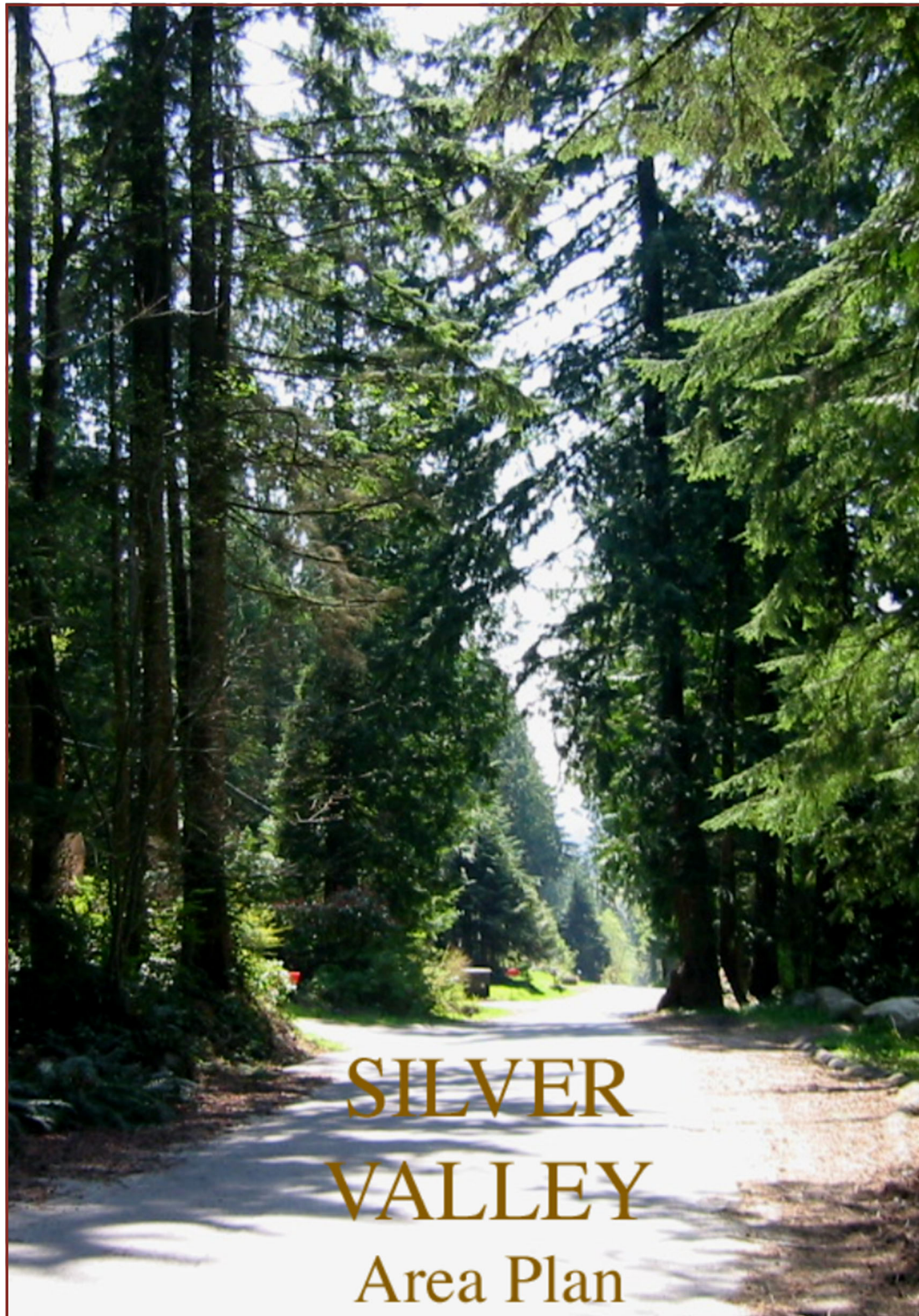




10.3 SILVER VALLEY AREA PLAN



SILVER VALLEY AREA PLAN

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1.0 INTRODUCTION

1.1 BACKGROUND

Silver Valley enjoys a unique status within the District of Maple Ridge. Its proximity to the Malcolm Knapp Research Forest and Golden Ears Park has identified it as a gateway to these popular recreation areas for residents and visitors alike. The forested hillsides of the area provide a backdrop for all the District that serves to reinforce its stated values for the natural environment. The creeks and rivers that bisect Silver Valley provide some of the richest salmon habitat in the Lower Mainland. With this context in mind, the community has also acknowledged Silver Valley can accept some of the District's dynamic growth, accommodating approximately 11,000 residents. It is the desire of the community to ensure that as growth occurs in Silver Valley, the elements that afford it a unique place in the District will be preserved, protected and celebrated.

1.2 OVERVIEW

1.2.1 RELATIONSHIP TO OCP AND OTHER PLANS

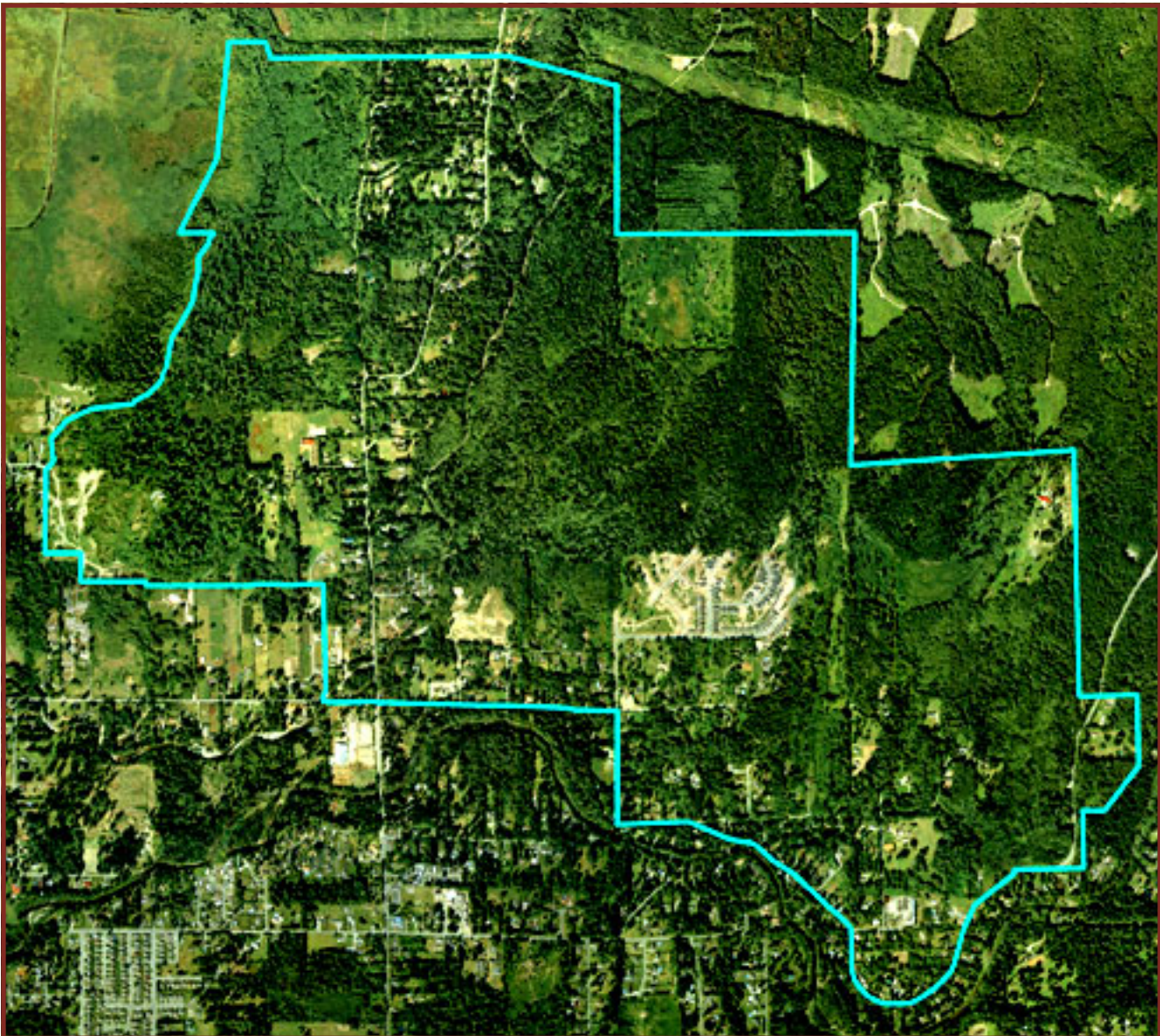
- a) The Silver Valley Area Plan is embedded within the umbrella policies of the Maple Ridge Official Community Plan and is to be read in conjunction with them.
- b) The Silver Valley Area Plan is derived from the concepts and principles described in the Silver Valley Area Planning Study completed in 2001. It is consistent with the objectives of other regulation and policy related to District planning and development.

1.2.2 FRAMEWORK

- (a) The purpose of the Area Plan is to provide the framework for the future development of an area recognized as an integrated planning unit. The framework for Silver Valley is based on principles associated with achieving a complete community. The Area Plan includes planning detail that determines the distribution of development capacity over four discreet neighbourhoods. The neighbourhoods are noncontiguous due to the physical characteristics of the area. The plan incorporates the intervening areas as an ancillary entity with distinct development objectives.

- (b) The Area Plan also provides detail for the distribution of density and use within neighbourhoods. It includes policy structured to achieve the desired community pattern within stated principles. The Area Plan addresses essential services and facilities, land uses, transportation systems, population density and sequencing of development. It acknowledges sustainability objectives stated in the OCP and as such considers costs and benefits of various actions upon the present and future social, economic and environmental fabric of the area.
- (c) The appended maps are intended to illustrate policies and principles contained in this Plan. Specific street layouts and uses will be determined in detail in subsequent documents.

Silver Valley Area Plan Boundaries



1.3 PROCESS

The Silver Valley Area Plan proposes an alternative development model than one typical of suburban growth. The direction was provided by extensive public consultation that occurred during 1994 with a Land Use Review for Silver Valley. Further public consultation for a general review of the OCP in 1996 confirmed many of the community objectives stated in 1994. The planning study that is the basis for the Area Plan also undertook extensive public consultation. That process included four workshop charettes. The participants were invited from a broad group of community stakeholders. Each day's work was presented at an open public meeting following that day's proceedings.





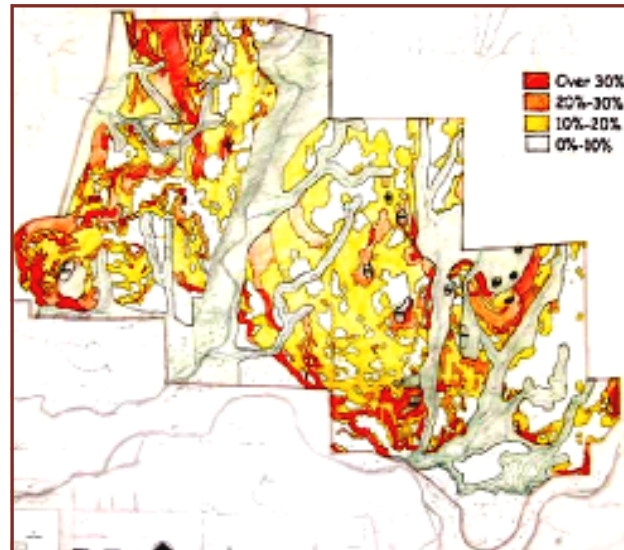
2.0 PHYSICAL CONTEXT

2.1 EXISTING SITE AND CONDITIONS

A detailed physical description of the Silver Valley area can be found in the 1992 study prepared for the District of Maple Ridge by Gartner Lee Limited titled *Silver Valley Environmental Assessment and Development Guidelines*. The following summarizes the description contained in that document.

2.1.1 TOPOGRAPHY AND GEOLOGY

- a) Three distinct regions are created by the North Alouette River and Millionaire Creek systems. Each of the three areas is characterized by complex, rolling bedrock topography. The bedrock is at or near the surface in much of the area.
- b) In general, the area rises away from the floodplain of the Alouette River along the south and west boundary. While the grade rises generally to the north, the North Alouette River, Millionaire Creek and the underlying bedrock, all contribute to significant irregularities in the topography.
- c) Three broad categories define the slope characteristics. Uplands and Moderate Slopes are areas of gently rolling to undulating to moderately sloping surface topography. Slopes can range up to 20 degrees (36%). Steep Valley Slopes found along the major creeks and rivers range from 20 degrees (36%) to 45 degrees (100%). The third category is Inactive Floodplain, which is planar or gently sloping land adjacent to the active floodplains of the Alouette and North Alouette Rivers.

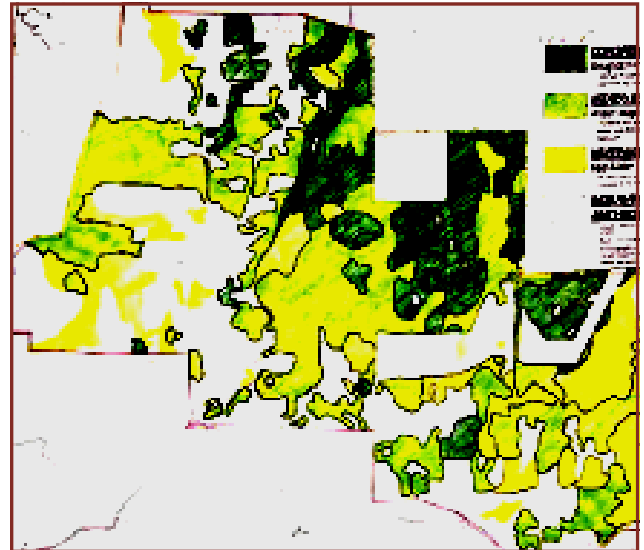


Slope/Geography

2.1.2 VEGETATION

- (a) Approximately 80% of Silver Valley remains wooded. All of the area was logged at one time. As much of the forest has regenerated to a hemlock and cedar association, considerable time has passed without disturbance. Some areas are characterized by deciduous forest. These areas have experienced more recent logging activity.

Two important, distinct vegetation communities that are also found within the Silver Valley area are marshlands and rock barrens. The marshlands to the west are part of the Blaney Creek watershed and now represent part of the Greater Vancouver Regional District's park system. The rock barrens are long-term natural clearings as the thin soils are incapable of supporting forest cover. They are, however, the source of diverse plant species not noted elsewhere in Silver Valley.



Vegetation

2.1.3 FISH AND WILDLIFE

- (a) The two rivers and various creek systems in Silver Valley support populations of Chum, Coho and Pink salmon. The most abundant of these is Chum. As well, there are populations of Cutthroat and Steelhead Trout in most of the systems.

- (b) Three mammal species have been identified in the area. The proximity of Golden Ears Park and the Malcolm Knapp Research Forest provides for movement of Black Bear, Cougar and Black-tailed deer into the area. As many as 26 species of birds have also been identified. The marshland to the west is important wintering and breeding habitat for waterfowl.



Watercourse / Setbacks

2.2 ENVIRONMENTALLY SENSITIVE AREAS

2.2.1 BIOPHYSICAL FEATURES

- a) The biophysical features of Silver Valley have a significant influence on the Silver Valley Area Plan. Each of the features must be considered in relation to the others as disturbance to one may impact many or all of the others. Development in the area will be sensitive to the following issues as they relate to the biophysical features:
- Flooding
 - Damage to fisheries spawning and rearing habitat
 - Handling of storm-water runoff
 - Tree retention
 - Erosion and failure of steep unstable slopes
 - Interruption of wildlife corridors
- b) In general, environmental sensitivity includes risk from development to existing flora and fauna in the area and to human habitation from natural hazards. The Area Plan addresses objectives of the Official Community Plan in minimizing these risks.





3.0 PRINCIPLES

3.1 GUIDING PRINCIPLES

The Guiding Principles for Silver Valley are the ‘foundations’ upon which all planning for the area is derived. They are also to be the measure of all future development of Silver Valley. The statements that embody the principles are to remain constant throughout the evolution of settlement in Silver Valley.

3.1.1 ENVIRONMENT FIRST

- Ensure significant environmental features of the site are protected or enhanced.
- Ensure that the ‘land informs development’ – development will be limited to suitable sites and follow guiding criteria.

3.1.2 SUSTAINABLE APPROACHES

The structure, form and character of the community must provide balance in environmental, social and economic benefits on an ongoing basis. This community will therefore;

- Incorporate ecologically based approaches in all aspects of development including open spaces, community parks, schoolyards, buildings, roads, sewage treatment, and storm water.
- Incorporate diversity in housing types and sizes to achieve a vibrant and diverse population, to serve as a foundation of a supportive and inclusive community.
- Contribute to the economic well being of each neighbourhood by facilitating and encouraging local and home-based employment; incorporating character elements that endear it to visitors, and; design and construct infrastructure that facilitates transportation choice and is affordable.

3.1.3 INTEGRATED COMMUNITY

- Integrate natural environment, housing, open space and infrastructure to achieve neighbourhoods and a community that is alive.

3.1.4 ADAPTABILITY

- Plan for incremental growth and changing market trends.
- Allow for the plan to adapt to meet economic opportunities over time.

3.1.5 HEALTHY COMMUNITY

- Ensure that the structure, form and character of the plan contribute to it being a healthy community.
- Ensure that neighbourhoods are safe, accessible and adaptable by design.
- Provide desirable lifestyle amenities for living, working and recreational needs.
- Ensure the plan is conducive to aging in place.

3.2 DEVELOPMENT PRINCIPLES

The following Development Principles respond to the Guiding Principles and refer to four primary topics that form the overall structure of the Silver Valley Area Plan. The four topics are; **Planning and Urban Design; Environment, Open Space and Recreation; Infrastructure; Economics**. The development principles are focused on the particular issues and conditions prevalent for the Silver Valley community and may be revised over time as the community evolves.

3.2.1 PLANNING AND URBAN DESIGN

- Plan development areas that have defined boundaries to prevent sprawl.
- Plan compact housing clusters as a solution to preserving natural environments and significant vegetation.
- Plan for a pedestrian oriented village centre that is mixed-use and accommodates piecemeal, incremental growth.
- Limit the extent of the village centre, and commercial parcel and building sizes to ensure that the desired village character and form is achieved.
- Accommodate parking on-street and in small lots off lanes or at the edge of the village.
- Ensure that community parks, plazas and gathering spaces define the village centre and each neighbourhood cluster.
- Maximize pedestrian safety and access to services and transit to encourage social interaction and reduce car trips.
- Provide for a variety of housing forms and types targeted to all markets, through incentive and performance zoning.

- Plan for schools and community facilities that are integrated with regional greenway linkages and open spaces.

3.2.2 ENVIRONMENT, OPEN SPACE AND RECREATION

- Promote patterns and forms of development that allow for retention of existing mature trees and vegetation.
- Plan development patterns, based on full seasonal analysis, that maintain existing hydrologic regimes, including groundwater flow and interflow.
- Maintain or improve fish habitat through an adaptive approach to establishing creek buffers.
- Respect existing topography, minimize erosion, integrate natural features and design open spaces to reflect the valued rural character and qualities of the community.
- Plan for a linked park and open space system that responds to recreational needs of the community and visitors.
- Maximize the multiple use of trails and greenway corridors by providing for and accommodating all users and patterns of use.
- Provide for a transitional buffer to natural and adjacent wilderness areas to ensure that the edges between development and nature appear organic and blurred.
- Maximize protection of wildlife corridors to minimize interaction with populated areas, and develop an education program for residents.
- Minimize the pollution effects of rural pasture, public landscapes and home gardening on water quality by adopting eco-sensitive management and natural landscape species.
- Foster the role of local stewardship groups in environmental protection and sustainable development.

3.2.3 INFRASTRUCTURE

- Adopt road and street types and standards that limit speed, fit to topography and minimize impervious areas.
- Utilize reduced road widths to achieve traffic calming, reduced site consumption, and maintenance of the desired rural character.
- Allow for an arterial road to become a street as it passes through a commercial centre or civic place to reinforce economic viability and character and accepting reduced speeds.
- Accommodate and treat storm water at/near the source wherever possible through maximizing permeable areas and minimizing storm water collection.
- Encourage unpaved, shared driveways and narrow paved lanes to housing clusters to minimize paved areas.
- Utilize rain and grey water collection systems where feasible for irrigation.
- Ensure that equestrian, bike and pedestrian routes are designated along roads and streets.

- Plan for local transit linkages to the village centre and Maple Ridge centre.
- Plan for pedestrians as a means of reducing car dependant trips in the community.
- Commit infrastructure to match defined densities and development pattern.

3.2.4 ECONOMICS

- Capitalize on all economic opportunities, no matter how small, to maximize effect of areas of economic development.
- Focus commercial development in a single village centre to achieve critical mass, image and character.
- Plan for local commercial needs recognizing that the village centre will be small, compact and informal in nature.
- Ensure that the form of the village centre achieves a character and atmosphere distinct from typical suburban forms.
- Encourage commercial development that accommodates mixed-uses: buildings integrating residential, office, retail.
- Control the types of retail and commercial uses in the village centre to ensure that services and character are consistent with the form of development.
- Encourage home-based business opportunities.
- Plan land development patterns that respond to the land, not to land ownership boundaries.
- Encourage strategic secondary economic development areas that capitalize on equestrian, tourism, and recreational economies.
- Encourage a housing mix that accommodates long-term demographic trends and densification within the defined development areas.





4.0 OVERVIEW OF THE PLAN

The plan can be summarized as it relates to nine basic community forms or elements. For each of these forms, this list describes key characteristics that are further detailed within the land-use structure of the plan, which follows.

4.1 DEFINITION OF DEVELOPMENT AREAS

- Distinct neighbourhoods within the community
- Development areas are defined by environmentally sensitive responses to vegetation, slopes, view and by open space linkages
- Development is formed in compact neighbourhood clusters
- Each development is conceived as a comprehensive increment

4.2 DISTRIBUTION AND LEVEL OF DENSITY

- Density is clustered in distinct walkable neighbourhoods
- Overall densities are medium to high within development areas
- Infill housing permits density to increase over time
- Higher densities are focused around commercial, schools and parks

4.3 MIX OF HOUSING

- Diverse mix of housing types
- Diverse housing types are integrated

4.4 LAND USE AND BUILDINGS

- Land uses are integrated
- Buildings allow for mixed-uses
- Buildings are compatible in scale regardless of use

4.5 ROADS AND LINKAGES

- Streets are designed for people and ‘accommodate’ traffic
- Roads inter-connect neighbourhoods and provide alternate routes
- Most streets are through streets
- Narrow streets with planted boulevards and narrow setbacks
- Strong street wall definition

4.6 PARKS AND OPEN SPACE

- Many smaller local parks
- Open spaces linked by network of greenways throughout
- Trails and open spaces designed as a network and integral part of the community plan

4.7 SCHOOL SITES

- Schools are located as an integral part of the centre of each Hamlet
- Schools are within walking distance of most students

4.8 COMMERCIAL

- Commercial areas are pedestrian-oriented mixed-use shopping streets

4.9 COMMUNITY AMENITIES

- Community amenities are integrated at the centre of each Hamlet
- Community buildings are multi-use and of civic importance as landmarks



5.0 COMMUNITY FORM

5.1 INTRODUCTION

5.1.1 SECTORS

The two major creek systems and ravines that flow north-south through Silver Valley divides the area into three distinct development areas or sectors. The three sectors include:

West Sector

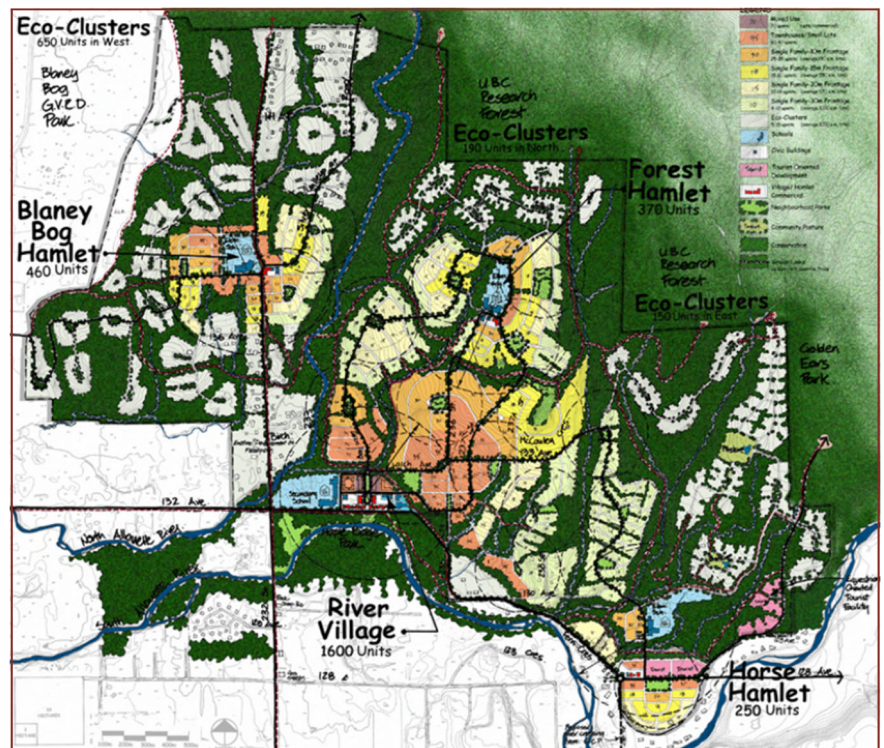
- Blaney Hamlet
- Eco-Clusters

Central Sector

- Forest Hamlet
- River Village
- Eco-Clusters

East Sector

- Horse Hamlet
- Eco-Clusters



5.1.2 COMMUNITY FORM

The community form is derived from four elements of the plan.

- River Village** is the focal point of the community, providing services that are common to the entire Silver Valley area.
- The **Hamlets** provide services to an area defined by a five minute walking distance.
- Eco-clusters** are more independent entities derived from opportunities to settle or develop limited areas that are within environmentally or visually important zones.
- Greenbelts define the character of the area, which is rural in nature and rich in natural amenities. Neighbourhoods are a vital element of any community and are common to River Village, the Hamlets and Eco-clusters. Their role is therefore defined as a subset of these broader elements.

5.2 RIVER VILLAGE

5.2.1 DESCRIPTION AND CONCEPT

- a) River Village is located along a main arterial route in the Silver Valley area, on Fern Crescent, between Maple Ridge Park to the south, and an escarpment to the north and east.
- b) River Village is the commercial heart of the Silver Valley area, and provides for the retail, service, office and civic needs for Silver Valley residents.

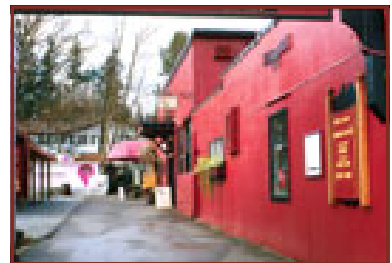
5.2.2 PRINCIPLES

- a) River Village is to be a complete community, with a main shopping street, integrated multi-family housing, mixed-use buildings, civic buildings and community facilities, including a high school, and an elementary school.
- b) A diverse mix of uses and a wide diversity of building types are encouraged for River Village to ensure a lively and integrated human environment.
- c) Change of uses and shared uses within buildings are permitted to allow River Village to develop and evolve over time.
- d) An integrated High School and community centre is envisioned on the western edge of River Village and is intended to be a significant component and the largest building in the fabric of the village.
- e) Civic buildings and amenities are to be concentrated in River Village to provide a nucleus for the Silver Valley area and help to define the character of the community.
- f) Residential areas should be developed in a manner to allow a gradual and natural increase in density over time.



5.2.3 MAIN STREET COMMERCIAL AREAS

- a) The shopping district is to be developed along a “main street” pattern with buildings fronting onto sidewalks. Strip commercial development with parking lots in front of the commercial space or commercial development behind parking lots will be discouraged in Silver Valley’s main commercial area.
- b) Secondary commercial development can occur on the lanes behind “main street” development, and are intended for commercial businesses requiring less visible and accessible locations.
- c) The shopping district will comprise:

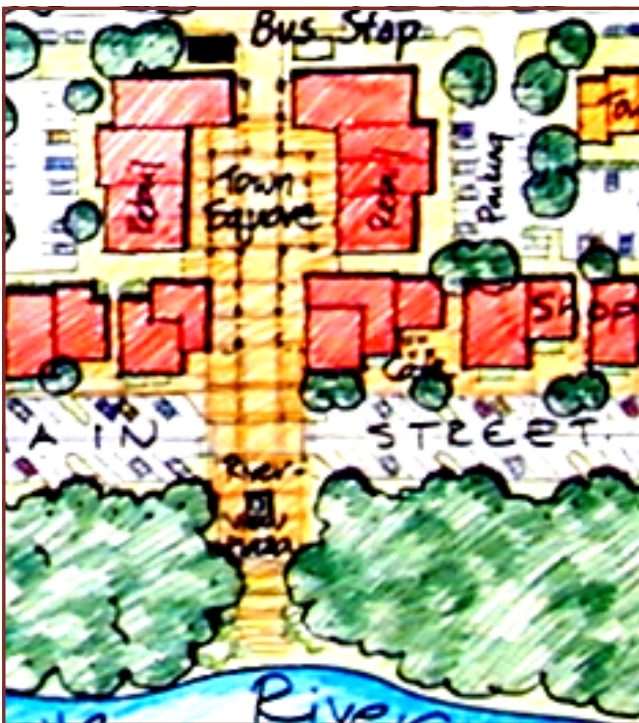


- Personal, business, retail, food and beverage and entertainment services to meet the needs of Silver Valley residents, and
 - Tourist destination uses that focus on the unique recreational and other assets of Silver Valley and surrounding Maple Ridge.
- d) The shopping district will evolve over a 15 to 20 year period and could involve:
- Mixed residential and commercial development
 - Redevelopment/expansion of mixed residential and commercial
 - New, commercial only or mixed residential and commercial development.
- e) The shopping district will be limited to 10,219m² of commercial uses, with 8,361 to 9,290m² of space to meet the needs of Silver Valley residents and the balance for destination commercial uses. The size of the commercial area is also limited to ensure a scale of development and quality of development that meets residents objectives for a “village commercial” shopping district.
- f) Development will be phased in order to:
- Meet the evolving demand for commercial services
 - To ensure the on-going viability of services that are provided.
- g) At or near build-out, the potential to expand the commercial area will be considered and will be based upon market studies to justify the expansion and ensure the viability of existing and new businesses.
- h) To reinforce and celebrate the public amenity of the park and river, the shopping street on Fern Crescent is to be on one side only, facing Maple Ridge Park and the Alouette River.
- i) Integration of different uses is encouraged between residential and commercial uses, either within a development block or within a single building. All commercial buildings can accommodate residential uses, in a variety of forms, either on upper floors or as interim uses.

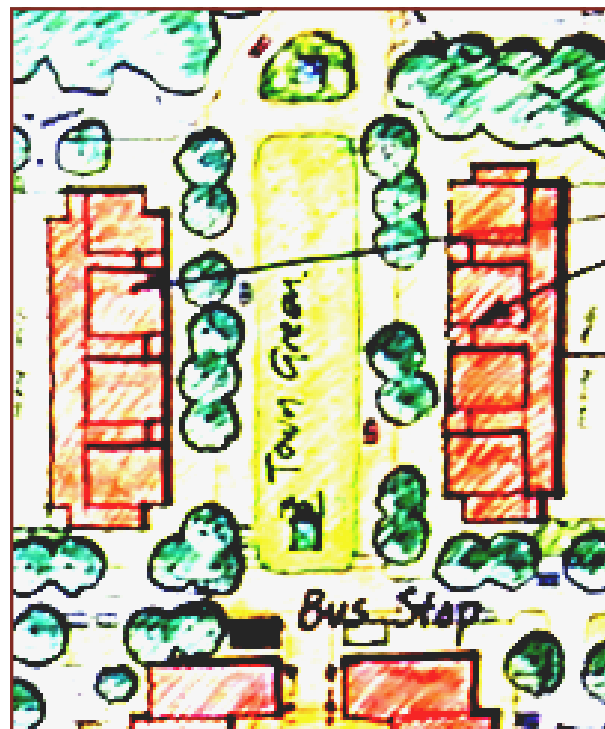


5.2.4 CIVIC AREAS

- a) Civic amenities including schools, a town hall, fire hall and police centre, library, day care, and bus stops are encouraged in River Village.
- b) A central Town Square, located in the middle of the shopping street and leading north to connect to a Town Green, will provide a civic node for River Village.
- c) A Town Green, aligned with and connected to the Town Square, will be provided north of the Town Square.
- d) Civic Buildings
 - Civic structures should be sited in prominent locations and conferred architectural distinction to serve as icons and gathering places for the community.
 - Civic architecture should be an important factor in defining and shaping the character of the community.
 - Civic facilities should be accessible to the community for mixed purposes and community events.
 - Civic buildings should be located at each end of the main shopping street to frame the limits of the Village and to provide gateway references for entry to the Village.



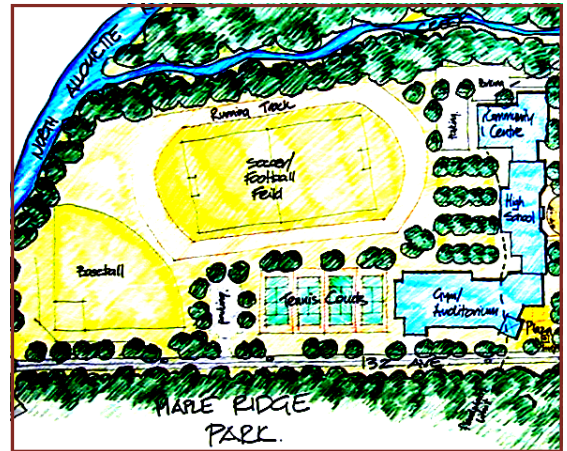
Town Square



Town Green

5.2.5 COMMUNITY FACILITIES

- a) Community buildings may accommodate shared uses.
- b) School buildings should be designed to accommodate spaces for other community uses, such as neighbourhood meetings, arts and crafts, society and social gatherings, etc., allowing public access during evenings and weekends, for the full calendar year.
- c) The High School should be designed to contribute to the learning environment of students by the integration of learning and business/work uses within the same building.
- d) An elementary school to serve the residents of River Village should be located adjacent to the High School.



5.2.6 RESIDENTIAL AREAS

- a) Home offices are encouraged in order to encourage local economic development, build a sustainable community and lessen traffic/commuting.
- b) Low rise apartment developments in River Village may be integrated with at-grade commercial units.
- c) All single family residential lots are permitted the development of an accessory building, separated from and to the rear of the principal building, subject to overall FSR and maximum site coverage. An accessory building may accommodate a residential use or a home-based business.
- d) The development of an accessory building on a single family residential lot is optional, and may be phased over time.
- e) Every residential site within River Village, with the exception of civic sites, may infill over time.



5.2.7 PARKS

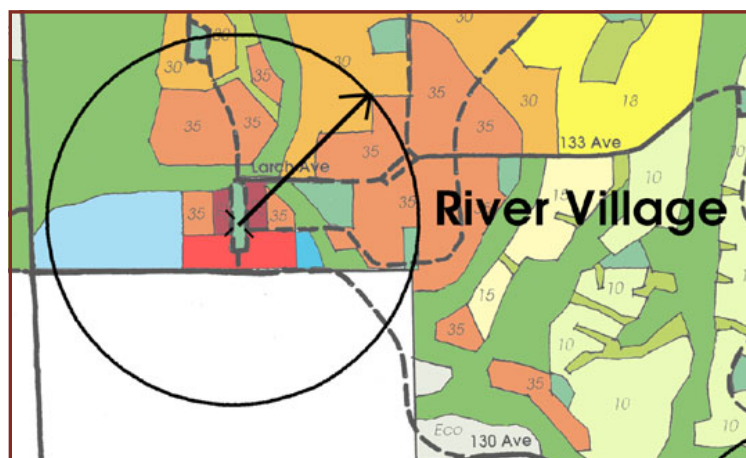
- a) One community park is proposed for the Silver Valley area, to be integrated with the Civic Area and High School. That park will provide sports facilities including playing fields and possibly tennis courts.

5.2.8 DENSITIES

- a) Residential densities range from 30 to 70 units per net hectare within a 5-minute walk of River Village. Approximately 400 residential units are proposed within this area, however, an additional 575 residences are proposed within an 800 metre radius of the centre.
- b) Higher densities of 70 units per hectare are generally limited to Balsam Street on opposing sides of the north half of the Community Green. These densities are typically associated with maisonette type of apartment accommodation within a mansion building form.
- c) Densities of 30 – 50 units per hectare will be encouraged for the balance of the River Village area and may include attached as well as detached fee-simple housing.
- d) In general, higher densities of 50 units per hectare should be located south of Balsam Creek between 233rd Street and 235th Street and should be within a 400 m or 5 minute walk from the village centre.

5.2.9 TRAFFIC AND CIRCULATION

- a) The location of River Village on Fern Crescent will necessitate traffic calming measures along the route as it passes through the Village. While legal maximum automobile speeds are consistent with those of all urban areas in the District, slower speeds are desirable during periods of greater activity in the Centre. Priority will be given to pedestrian mobility as a means of moderating traffic speeds, i.e. a change of surface treatment and materials to highlight pedestrian crosswalks.
- b) River Village is pedestrian-oriented and is a walkable scale, with a significant number of residents within a 5 minute walk.
- c) The main shopping street, civic centre, Town Square and the Town Green will all be interconnected with a pedestrian oriented, enhanced public realm.



5.3 HAMLETS

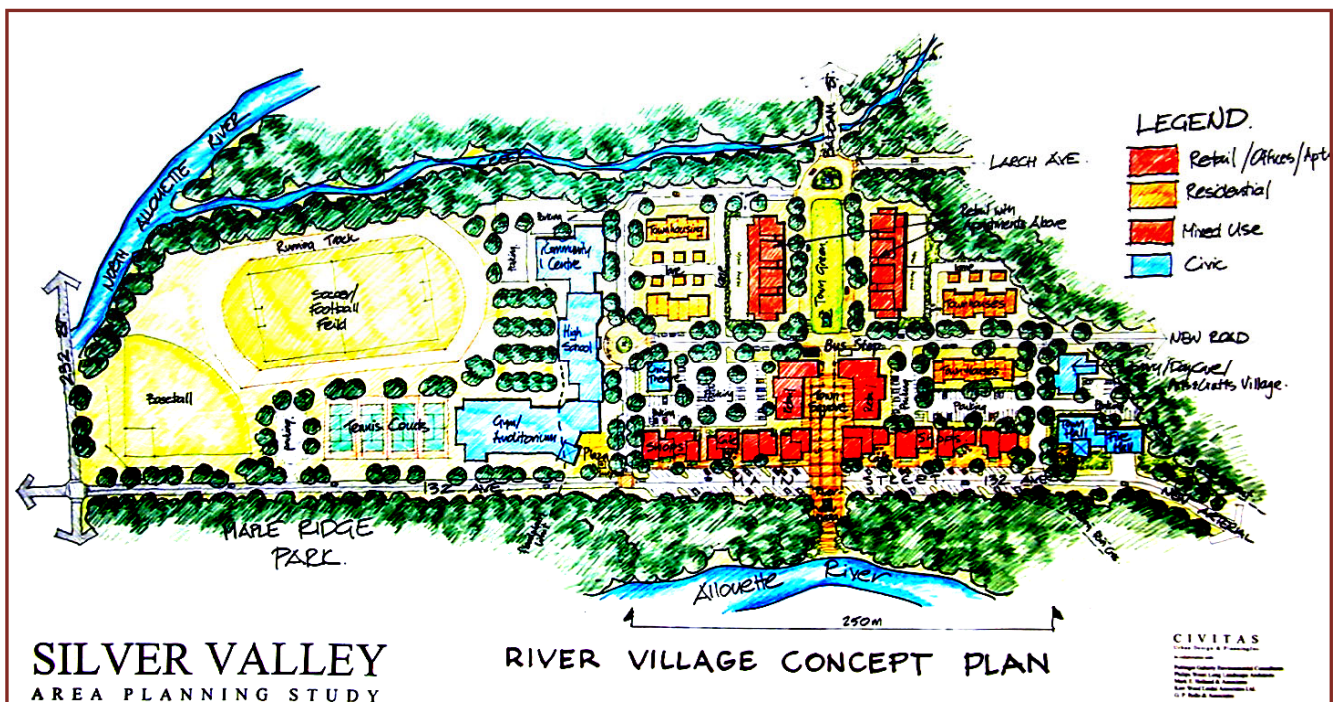
5.3.1 DESCRIPTION AND CONCEPT

- a) A Hamlet is a planned and complete village that encompasses diverse housing types, school and parks, transit access and basic commercial needs, best described as the traditional corner store, limited to approximately 50m² in retail area.

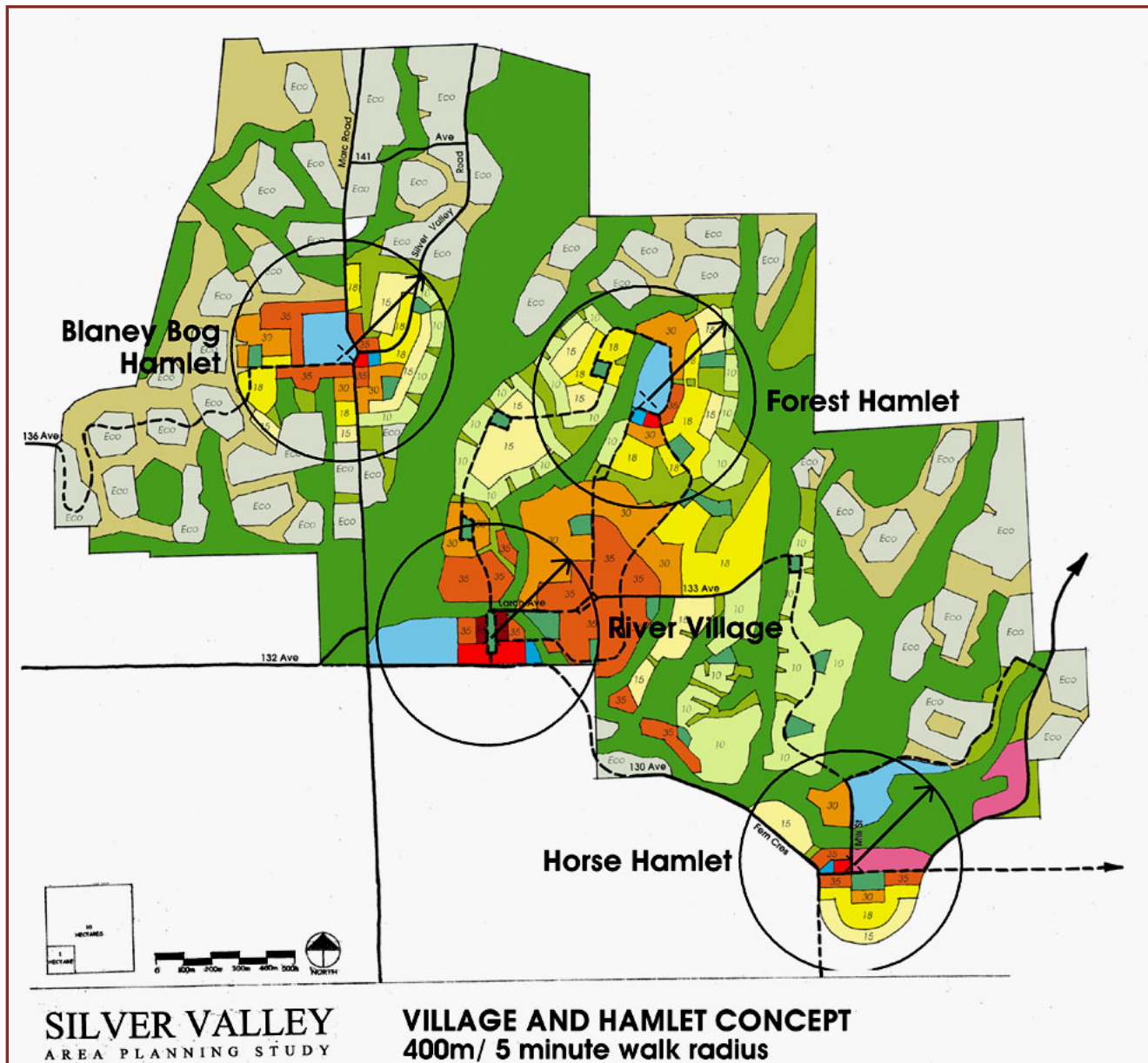
- b) Each Hamlet pattern is based on a centre which is the Civic Area, which includes a park and school, limited commercial space, civic uses, and higher density residential. This pattern is common to all Hamlets, with variations to accommodate site constraints.
- c) Hamlets are designed to limit the need for auto trips by providing access to basic household needs within a short, safe and desirable walking distance.
- d) A single Hamlet is composed of several neighbourhoods.
- e) Each Hamlet is themed to respond to existing natural features, uses and/or other opportunities.
- f) A total of 3 Hamlets will form the basic structure for the Silver Valley area neighbourhoods.

5.3.2 PRINCIPLES

- a) Hamlets are to be the defining structure for the development of the community and should provide the basis for theming of the communities.
- b) Spacing between schools, clusters of density, open spaces and parks within each hamlet will be defined by a comfortable walking distance.
- c) Each Hamlet should provide a civic focus for surrounding neighbourhoods. Location of schools, parks, commercial and community amenities should be within an identifiable centre for each Hamlet.
- d) Each Hamlet should be distinctive in form, character and theme.
- e) Residential areas should be developed in a manner to allow a gradual and natural increase in density over time.
- f) Hamlet scale is generally defined by a 400 metre, 5-minute, walking radius from a central square or main intersection.



- g) Equitable park areas are to be provided for all neighbourhoods.
- h) For each community, provide a balance between natural and developed parks that respond to the recreational needs of the community.



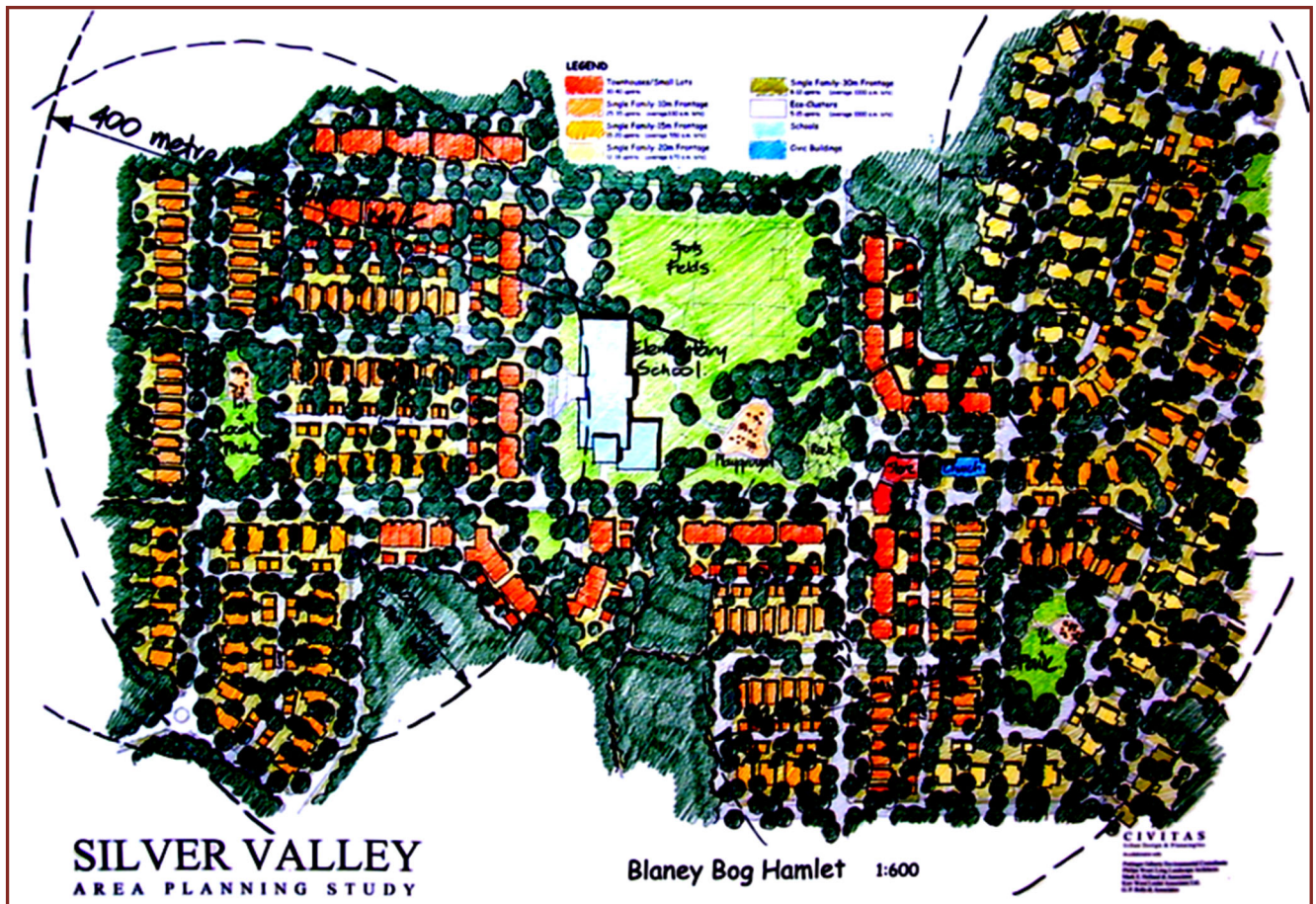
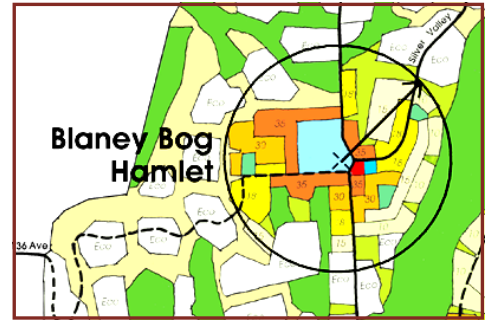
5.3.3 SPECIFIC HAMLETS

a) Blaney Hamlet

- i. Blaney Hamlet is located in the west sector on the west side of the North Alouette River and just east of Blaney Bog. Blaney Hamlet consists of 3 neighbourhoods, surrounded by a number of Eco-Clusters.

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- ii. Blaney Hamlet should be centred at 232nd Street, at approximately 137th Avenue. The Hamlet centre should contain a civic area, comprised of a park, school and community facility, such as a day care. The centre should also include a small commercial area that is typically between 90 – 140 m².
- iii. Residential developments should be focussed around the school and park and tightly clustered to respond to areas of steep terrain and the view impact of development from distant vistas.
- iv. A total of 460 residential units are allocated to Blaney Hamlet, consisting mostly of small lot single family and limited townhousing.

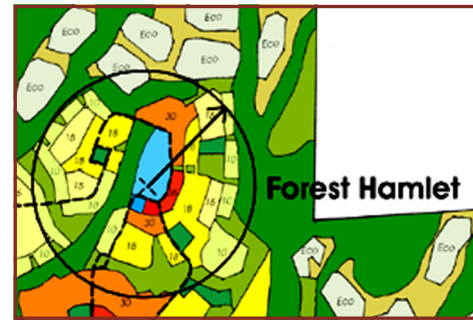


b) Forest Hamlet

- i. Forest Hamlet is located in the central sector on the upper slopes adjacent to the UBC Research Forest.
- ii. Forest Hamlet should be centred at the intersection of 2 main streets, and should contain a civic area, comprised of a park, school, and community facility, such as a day care. The Centre should also include a small commercial area that is typically between 90 – 140 m².

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- iii. Forest Hamlet is divided by a significant creek and greenway. Access between the two sides will be provided principally by a network of trails through open space corridors.
- iv. Forest Hamlet consists of 3 neighbourhoods, surrounded by several Eco-Clusters to the north and by additional neighbourhoods to the west and south.
- v. A total of 500 units are allocated to Forest Hamlet, consisting mainly of small to medium lot single family dwellings and limited potential townhousing.

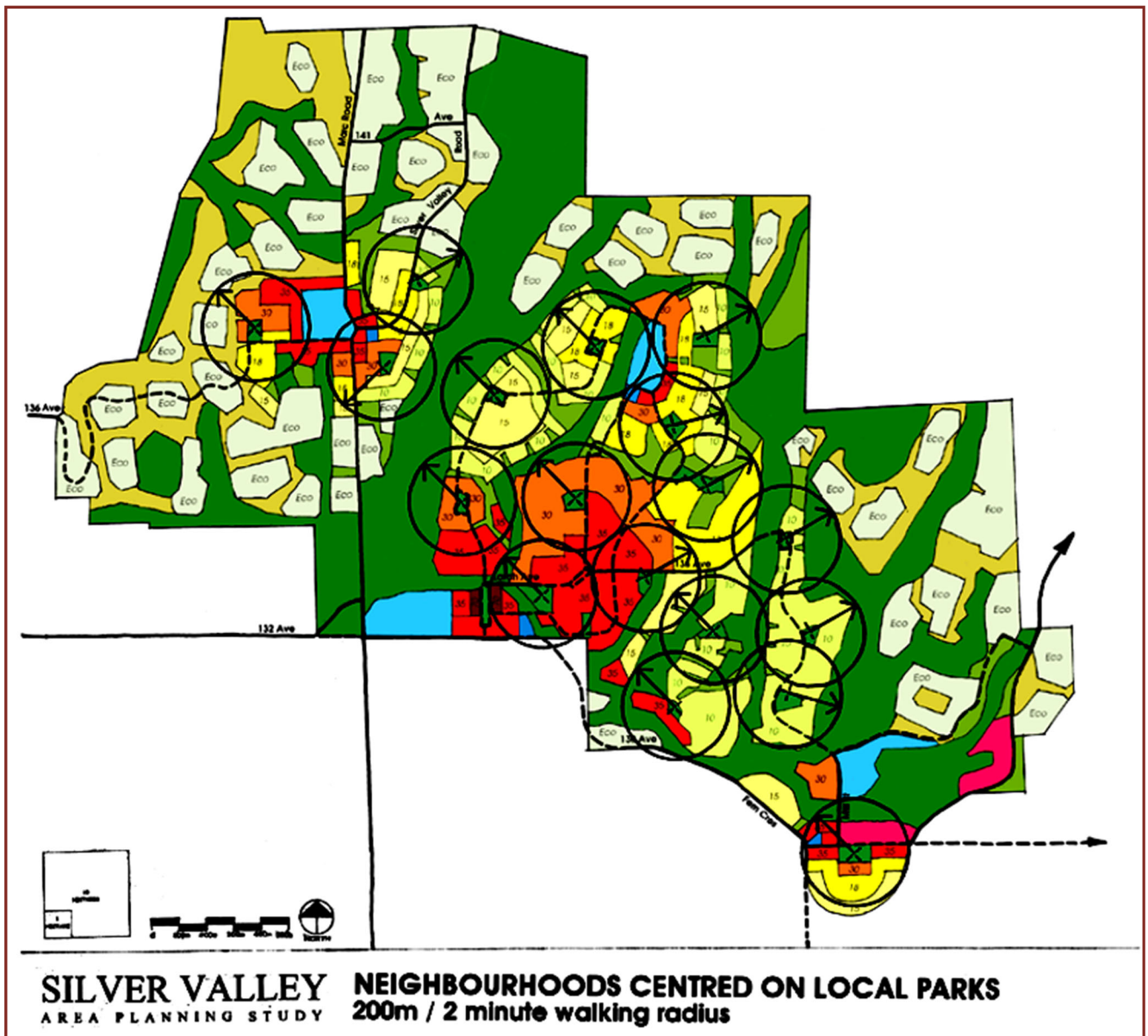


c) Horse Hamlet

- i. Horse Hamlet is located in the east sector within a crescent formed by the Alouette River and adjacent to an entry to Golden Ears Provincial Park.
- ii. Horse Hamlet is significantly interlaced with streams that create separate development cells, and preclude the location of the school directly adjacent to the commercial centre.
- iii. Horse Hamlet should be centred on an elementary school located within a 5 minute walk of most residents, and the principal commercial and community facilities should be located across a creek on 128th Avenue. The Hamlet Centre should contain a civic area, comprised of a park, school and community facility such as a daycare. The Centre should also include a small commercial area that is typically between 90 – 140 m².
- iv. A total of 240 units are allocated to Horse Hamlet, contained in a tightly compacted, neighbourhood scaled residential area.
- v. Horse Hamlet consists of 2 neighbourhoods, and surrounded by several neighbourhoods to the northwest and by Eco-Clusters to the northeast.
- vi. Horse Hamlet should be focussed on an equestrian theme.
- vii. A commercial precinct should be centred at the intersection of 128th Avenue and Fern Crescent to provide a focal point for the residential areas.
- viii. Commercial development in Horse Hamlet will primarily be destination recreational (equestrian theme) and tourism uses.
- ix. The scale of commercial service development serving the needs of Horse Hamlet residents will be limited to 93 to 185m²+/-.
- x. Equestrian uses, including stables, tack shops and paddocks are concentrated in the eastern sector above Horse Hamlet, and should be integrated with residential areas and supported within the commercial area of the Hamlet.
- xi. Tourist commercial uses encouraged and integrated within the core of Horse Hamlet may include tack shops, hotel facilities, horse boarding, riding schools, etc.



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5.3.4 NEIGHBOURHOODS

- A Neighbourhood is a subset of a Hamlet, generally defined by a 200 metre, 2-minute walking radius from a central local community and/or park space and a transit stop.
- A total of 15 to 20 Neighbourhoods will be provided in the Silver Valley area.
- Each Neighbourhood is identifiable by housing focussed on the central local park space and surrounding open space or environmental preserve.
- Individual Eco-clusters may function as a neighbourhood although two or more Eco-clusters may also relate as a neighbourhood unit. The principle of a neighbourhood focus, primarily associated with a park space, also applies here.
- Location, size and form of Neighbourhoods should be determined by environmental constraints. Spacing of Neighbourhoods should be generally distributed to minimize overlapping of each walking radius.

- f) Neighbourhoods are based on the principle of housing clusters designed to allow children to safely play in the street or walk to the park, and to promote a sense of social cohesion among residents.
- g) Neighbourhoods should be ideally sized to promote neighbourliness among residents while still maintaining a sense of social independence.
- h) Local parks should be centrally located in each Neighbourhood, fronted by streets and housing rather than surrounded by fencing and rear yards. Access to the parks should be provided along local streets.
- i) In the west sector, Neighbourhoods are located around the Blaney Hamlet to minimize impacts on environmentally sensitive areas, regrading of steep slopes, and infringement of existing uphill acreages.
- j) In the central sector, to take advantage of the relative lack of constraints for development within this sector, Neighbourhoods are distributed to minimize overlap of walking radii.
- k) In the east sector, Neighbourhoods may be sited where possible, limited and shaped by the considerable environmental constraints in the area.



5.3.5 COMMERCIAL AREAS

- a) Local service commercial uses catering to the needs of residents are encouraged within Hamlet Centres.
- b) The commercial service area is primarily limited to the needs of the residents within the 4-500 metre radius from the Hamlet Centre.



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- c) The commercial floor space in the Blaney Hamlet is typically between 90-140m².

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- d) The commercial floor space in the Forest Hamlet centre is typically between 90-140m².
- e) All commercial buildings can accommodate residential uses, in a variety of forms, either on upper floors or as interim uses.



5.3.6 COMMUNITY AREAS

- a) Community buildings may accommodate shared uses.
- b) School buildings should be designed to accommodate spaces for other community uses, such as neighbourhood meetings, arts and crafts, society and social gatherings, etc.

5.3.7 RESIDENTIAL AREAS

- a) Home offices are encouraged in order to encourage local economic development, build a sustainable community and lessen traffic/commuting.
- b) All single family residential lots are permitted the development of a second detached unit, separated from and to the rear of the principal building, subject to overall FSR and maximum site coverage.
- c) The development of the second dwelling unit on a single family residential lot is optional, and may be phased over time.
- d) In Horse Hamlet, consider the development of larger “mansion” style residential developments that may contain 4 to 6 strata units or which may be used as a bed and breakfast or hotel.



5.3.8 PARKS AND SCHOOLS

- a) A variety of park typologies will be provided as follows:
 - i. Community Park – adjacent to a High School
 - ii. School Park – associated with an elementary school
 - iii. Neighbourhood Park – within a 5 minute walk
- b) School sites have been located within unique environmental and landscape character areas, such as Wetland Environment, Natural Forest Environment, River Terrace Environment, and Equestrian Landscaped Environment. All schools are sited to take advantage of natural features and natural open spaces associated with creeks and/or environmentally sensitive areas.
- c) Civic areas are the central focus of each neighbourhood and should be developed around their neighbourhood character. Associated with each civic area is a school, park area and natural open space.
- d) School parks are 0.4 ha (1 acre) to 0.6 ha (1.5 acres) in size and should be within a 5 – 10 minute walk from most dwellings. These parks should be integrated with the school site, the environment, topography and natural features of the area. Included in the parks should be playfields, school grounds, and adjacent natural open space. Some educational aspect should be added to the design and function of the park.

- e) Neighbourhood Parks are 0.2 ha (.5 acre) to 0.6 ha (1.5 acres) in size and should be within a 2 – 5 minute walk from a dwelling. These parks should provide an opportunity for social gathering, and will require appropriate amenities, i.e., benches, pathways, community mailboxes, and should include small playground structures where appropriate.

5.3.9 DENSITIES

- a) Medium to medium/low densities, ranging from 15 to 40 units per hectare, will be located adjacent to schools, commercial uses, and civic uses.
- b) Low densities, ranging from 8 to 18 units per hectare, are located at the fringes of the 5 minute walking distance from a centre.



Low densities at fringes of 5 minute walking distance



Medium to med/low densities adjacent to neighbourhood centre



5.4 ECO-CLUSTERS

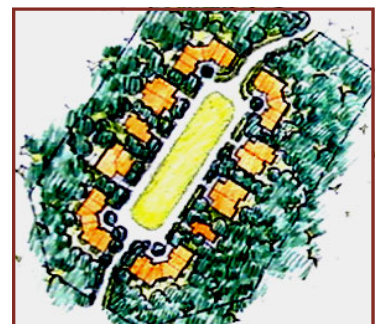
5.4.1 DESCRIPTION AND CONCEPT

- a) An Eco-Cluster is a group of housing units, condensed within clearly defined limits, surrounded by open space and linked to other parts of the Silver Valley community by a single local road.



5.4.2 PRINCIPLES

- a) Eco-clusters are intended to provide development opportunities in sparsely developed or rural areas, in a cluster form which supports sensitive implementation, minimal site regrading and tree clearing, and integration of housing into a forest setting.
- b) Eco-Clusters are located in areas where topography is difficult, view impacts need to be minimized, and the existing rural character should be retained.
- c) Development limits for Eco-Clusters are generally defined so as to maximize retention of existing vegetation and to limit the general disturbance of the natural setting. The actual limit of the developable areas is to be determined upon completion of a thorough physical inventory of the site. In general, development should be limited to areas where existing grades are less than 20%. Development may occur on steeper grades conditional on sensitive response to site conditions. In no instance will development be permitted when existing grades exceed 30%.
- d) Eco-Clusters are located at the fringes of Hamlets as a transitional form of housing between Hamlets and forest.
- e) The focal point of each Eco-Cluster is a small green or parkette which will serve as frontage for most units in the cluster.



5.4.3 LOCATIONS

- a) In the west sector, 15 to 20 Eco-Clusters are located around the north and west edges of Blaney Hamlet as transitional development areas between forest and Hamlet. The Eco-Clusters to the north of the Hamlet should incorporate limited settlements in existing rural areas.
- b) In the central sector, a limited number of Eco-Clusters are planned for the northern edges around Forest Hamlet, abutting the UBC Research Forest.

- c) In the eastern sector, Eco-Clusters are located upland of Horse Hamlet. These Eco-Clusters should be lower in density and more rural in atmosphere to support the equestrian theme for the area.



5.4.4 RESIDENTIAL AREAS

- a) All single family residential lots are permitted the development of a second detached unit, separated from and to the rear of the principal building, subject to overall FSR and maximum site coverage.
- b) The development of the second dwelling unit on a single family residential lot is optional, and may be phased over time.

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- c) As a means of providing a diversity of housing types, consider integrating duplex, triplex, and fourplex developments that have the appearance of a single larger residence into the Eco-Clusters.
- d) Home based businesses are an integral part of the Maple Ridge economy and will be encouraged in Silver Valley in order to help create a more self-sustaining community, lessen traffic and commuting and assist Maple Ridge in achieving goals of building “complete communities” articulated in Metro Vancouver’s Regional Growth Strategy.

5.4.5 PARKS

- a) Parkettes are 0.1 ha (1/8 acre) to 0.2 ha (.5 acre) in size and also serve as traffic calming devices. Parkettes are natural in character and are integrated with trail, road, and infrastructure systems to expand on varying open space opportunities.

5.4.6 DENSITIES

- a) Densities and housing types should be diversified within and between Eco-Clusters.
- b) The densities of Eco-Clusters in the eastern sector should be lower than other Eco-Clusters due to limited access and the requirements for accommodating equestrian activities, i.e. pastures and stables.
- c) An Eco-Cluster includes varying levels of density, ranging from 5 to 15 units per hectare, in the form of single and/or multi-family units, dependent on proximity to a Hamlet centre, slope constraints, view impacts, and existing development.
- d) Residential areas should be developed in a manner to allow a gradual and natural increase in density over time.

5.5 GREEN BELTS

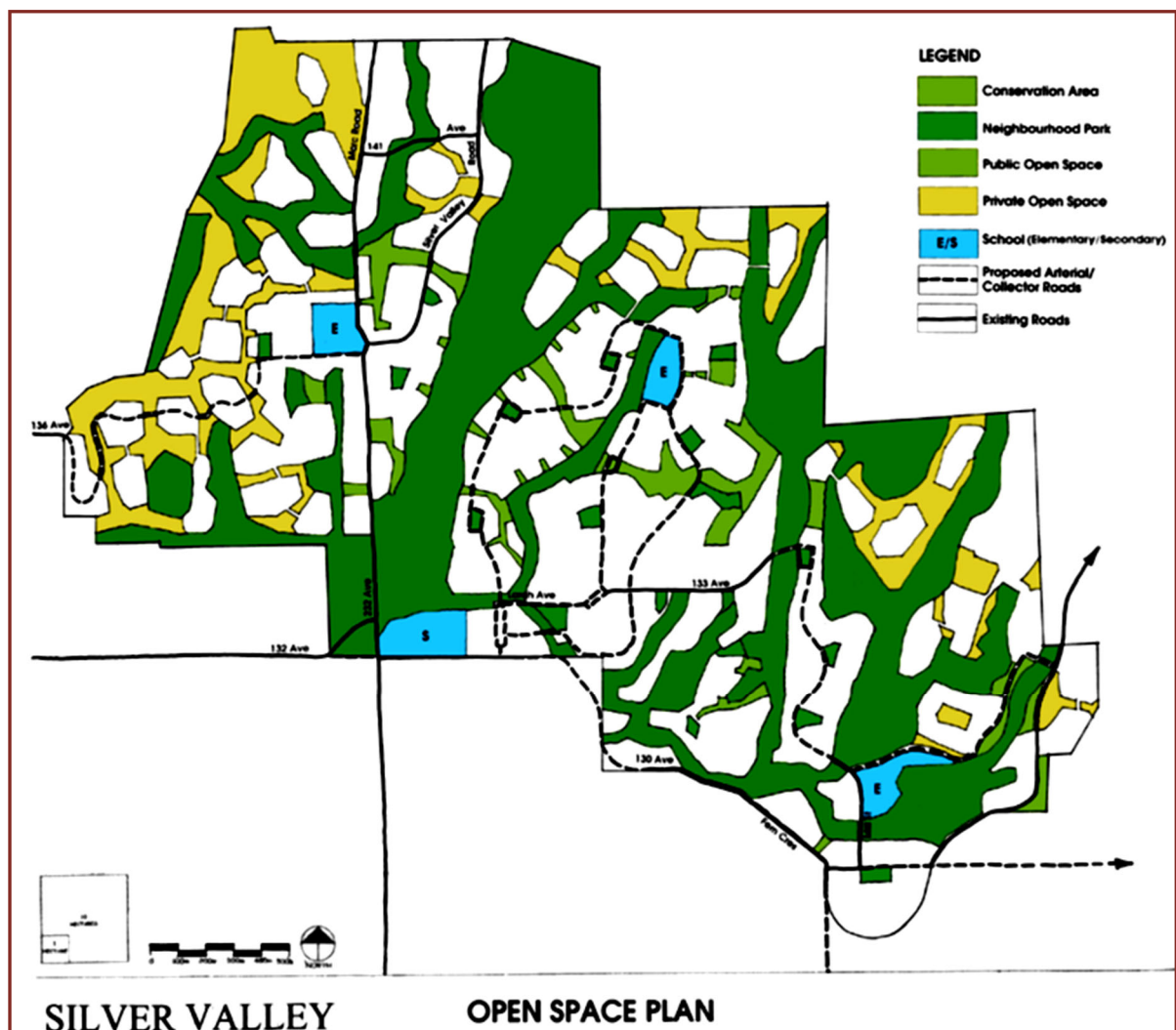
5.5.1 DESCRIPTION AND CONCEPT

- a) Green Belts are the natural areas in Silver Valley with great bio-diversity and the undeveloped areas left in their natural state and/or restored, after development, to their natural condition.
- b) The creeks and watercourses in the Silver Valley area are tributaries to the Alouette River System and are significant natural features in near pristine condition.



5.5.2 PRINCIPLES

- a) Environmentally sensitive and/or unique natural open spaces should be preserved, enhanced, and under public ownership.

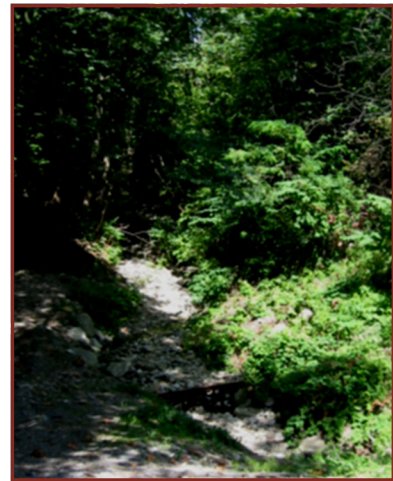


- b) Natural vegetation in the environment and landscape of Silver Valley should be retained and/or restored.
- c) Natural open spaces should, wherever possible, be connected and/or continuous.
- d) Neighbourhoods and open space character should reflect the surrounding natural environment and bio-diversity of natural areas.
- e) In development areas respect, retain, and enhance natural features and other environmentally sensitive occurrences such as rocky knolls.
- f) Ensure Best Management Practices (BMP's) and principles of sustainability are followed in the development and planning of Silver Valley to minimize environmental impacts.
- g) Tree retention should be maximized throughout the Silver Valley area.



5.5.3 CREEKS AND SETBACKS

- a) Ensure streams/watercourses are considered when planning infrastructure.
- b) Minimize the number of watercourse crossings to reduce impacts and prevent intrusion into greenways. Ensure that crossings minimize impacts on watercourses.
- c) Minimize disruption to interflow and ground water flow through storm water Best Management Practices.
- d) Protect watercourses and their riparian zones which will, in turn, also protect vegetation and wildlife habitat corridors.
- e) Encourage appropriate wildlife use of natural open spaces and trails systems, while ensuring that yard maintenance and other practices are followed to minimize interaction between development and wildlife such as bears, cougars, and raccoons.
- f) Ensure water quality improvements through developer and homeowner Best Management Practices.
- g) Adopt varying widths of setbacks around watercourses to achieve a greater amount of natural open space and to minimize the number of watercourse crossings. Categorize setbacks into 3 zones to determine the degree of environmental protection afforded:
 - An inner or red zone, considered a no-touch zone, wide enough to cover the riparian area identified and described in the Maple Ridge Official Community Plan and the provincial Fish Protection Act.

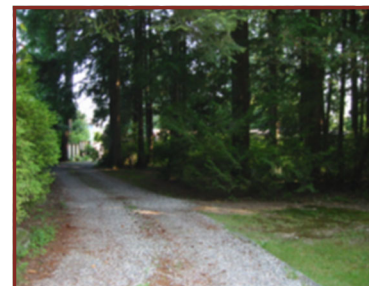


- A middle or yellow zone, defined as a 50 metre wide band immediately adjacent to the red zone. The width and configuration of this zone may be varied, based on the environmental values present. An inventory should be conducted within this zone to determine the potential impacts of development and to develop an environmental management plan to minimize impacts. Limitations on development in a yellow zone will establish a set of criteria and provisions to be included in the development approval process, and to be confirmed during the implementation process.
- A green or outer zone represents the developable area, which is the balance of the land not adjacent to a watercourse.



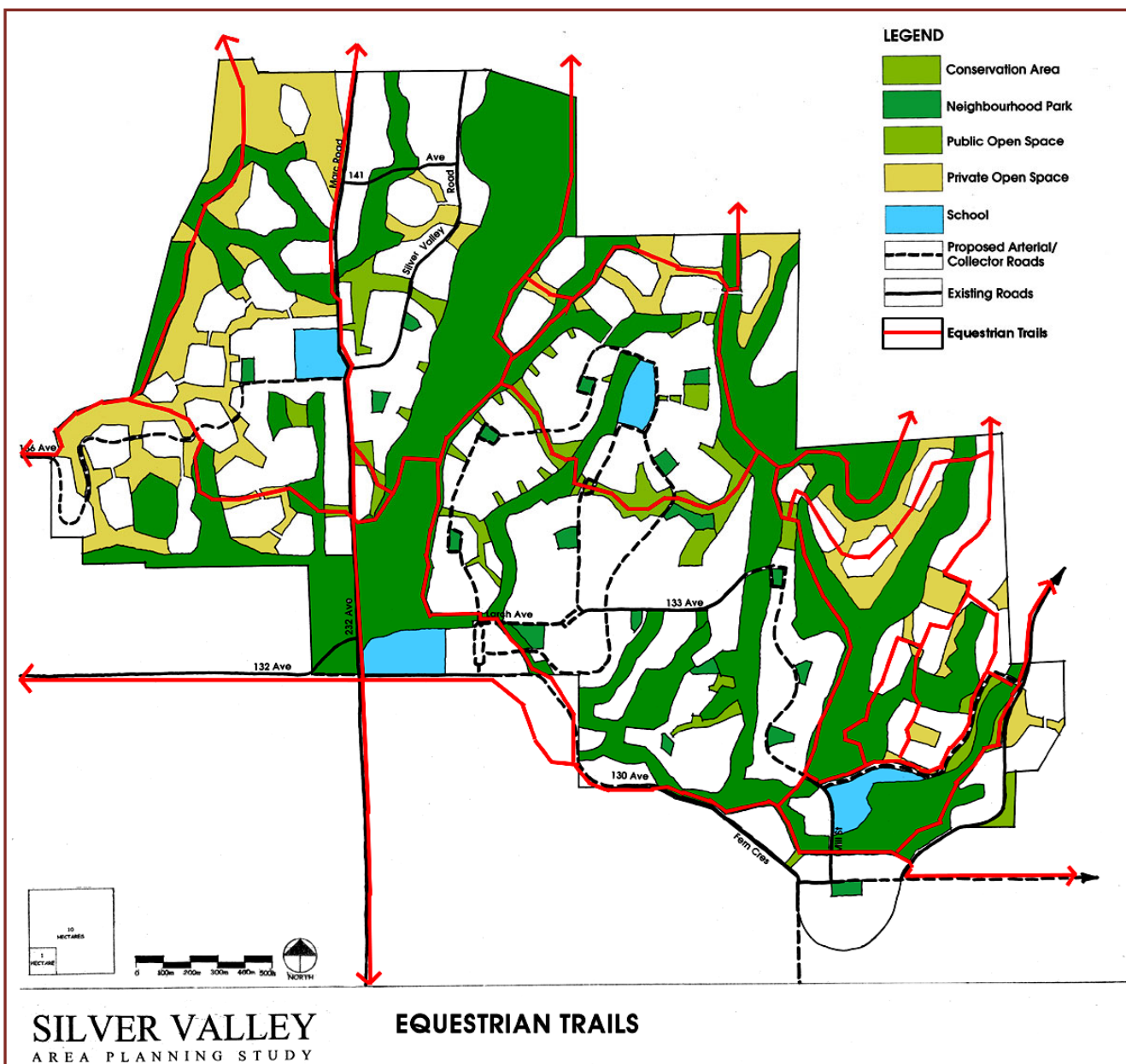
5.5.4 NATURAL OPEN SPACES

- New vegetation introduced into Silver Valley development areas should principally be native and should enhance the existing natural systems.
- Development should be integrated with existing trees wherever possible, and individual projects should be planned with tree retention in mind.
- Transition from development to the edges of the natural environment should be well integrated. Where significant site clearing has occurred adjacent to forest areas, a transition of natural planting should be implemented through restoring the forest edge and/or vegetation previously removed.
- In natural areas with environmental sensitivity, take measures to protect edge conditions and to limit development appropriately.
- Provide a variety of trails that ensure strong linkages and connections to surrounding amenities and community features.
 - Preserve and enhance historic and existing trails.
 - Establish a hierarchy of trails throughout the natural open space areas, i.e.:



• Horse Trail:	horses, pedestrians
• Secondary Horse Trail:	horses, pedestrians
• Primary Trails:	pedestrians, cyclists
• Secondary Trails:	pedestrians

- iii. Plan and locate trails throughout development to maximize safety considerations such as wildlife, surface materials, visibility, and accessibility.
- iv. Consult and apply the Community Greenways Stewardship Series document produced by the Provincial and Federal Governments when establishing proposed trails as development occurs.
- v. Allow foot powered mobility only on trails. No motorized vehicles permitted, with the exception of service vehicles for operations and maintenance.
- vi. Create nodes where trails and pathways cross roads, to identify trail crossing and to provide traffic calming measures.
- vii. Establish an appropriate maintenance and management strategy for trails and natural open spaces, on both private and public lands. Explore feasibility of partnerships for the development and maintenance of trails and natural open spaces.





6.0 IMPLEMENTATION AND FINANCES

- 6.1 The proper sequence of development in Silver Valley will ensure that initial capital costs plus on-going servicing costs will be minimized for Maple Ridge taxpayers. Sequencing of development will also ensure that development will proceed in the most efficient manner and provide the financial incentives for the development community to implement the Silver Valley Plan.
- 6.2 Towards this end, developers and Maple Ridge must respond to changing market demand; land ownership; topography; soil conditions; environmental issues, site servicing costs and the need to create “affordable” development.
- 6.3 Planning, engineering, and financial analyses have shown that the optimum sequence of development is important to the viability of the plan. This sequence of development will form the basis of Silver Valley development over an anticipated development period of 15 to 20 years.
- 6.4 The acquisition of civic lands, including park lands, is an integral part of the Silver Valley Plan. These lands will be confirmed in advance of development and financial planning for development will give consideration to their acquisition, development and maintenance.





7.0 DESIGN GUIDELINES

7.1 DESIGN GUIDELINES FOR RIVER VILLAGE

7.1.1 SITING AND ORIENTATION

- a) Landscape buffers should be restricted and limited as a form of land use divider.



7.1.2 USES

- a) Commercial uses are limited to a maximum of 2 levels of commercial space in River Village.
- b) Retail uses are permitted at ground level only,
- c) Office uses are permitted at either ground level or at the second storey level.
- d) Secondary retail units in commercial buildings should be accessed from the lane.
- e) Parking for commercial uses should be provided as surface parking.



7.1.3 MASSING

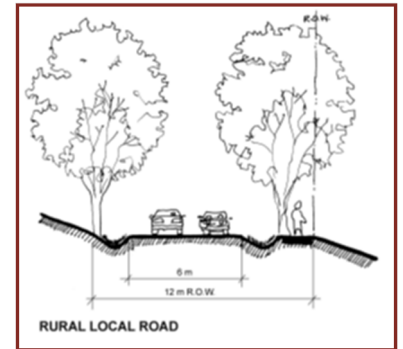
- a) Buildings in River Village should be limited in scale.
- b) Retail frontages should be small scale, individual storefronts with direct access from the street and pedestrian scale signage.
- c) Storefront modules should not exceed 15m in width.
- d) Shopping streets should manifest a diversity of building facades, massing and architectural expression, with a mix of uses in addition to retail and office or residential above.
- e) Strip mall development and large commercial outlets such as big box retail are not permitted.
- f) On site parking for commercial uses must be located to the rear of buildings.
- g) Rain protection for pedestrians is encouraged on commercial streets.



7.2 DESIGN GUIDELINES FOR HAMLETS

7.2.1 USES

- a) Retail uses are permitted at ground level only,
- b) Office uses are permitted at either ground level or at the second storey level.
- c) Buildings containing commercial uses should reflect the same character and scale as the residential buildings in the Hamlet.
- d) Commercial uses are permitted on corner sites only. The massing of the building should maintain a presence on both streets, with particular emphasis on a design that addresses the corner.
- e) Parking for commercial uses in Hamlets may be accommodated on the street. Onsite parking for commercial uses must be located to the rear of the building.
- f) Signage for commercial uses should be unobtrusive. Free-standing signs and backlit signs will not be permitted.



7.3 DESIGN GUIDELINES FOR ECO-CLUSTERS

- a) Residential buildings in Eco-clusters should front onto prominent streets or a parkette.

7.4 DESIGN GUIDELINES FOR RESIDENTIAL DEVELOPMENTS

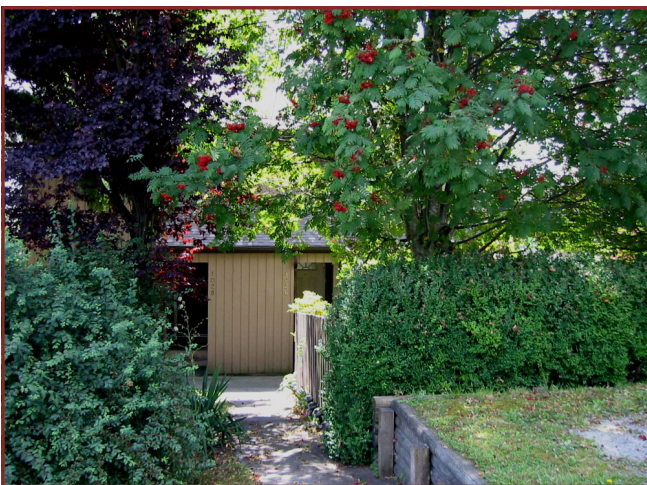
- a) Wherever possible, all single family lots should be serviced by a rear lane. Where lanes are not possible due to environmental or topographical constraints, access shall be from a street.
- b) On site parking shall be accessed from a lane, or in cases where no lane is possible, on site parking shall be located in the rear yard setback and accessed by a sideyard driveway from the street.
- c) On single family lots, a secondary dwelling unit shall be located in the rear yard, with access to the dwelling unit from the lane. In cases where no lane is possible, access to the second unit shall be from a side yard driveway entered from the street.
- d) Within Eco-Clusters, access to a secondary dwelling unit may be from a side yard drive.



- e) On larger lots and Eco-Cluster lots, a secondary dwelling unit may be equivalent to, but not larger, in size than the principal residence.
- f) On smaller lots, the secondary unit may be in form of a smaller granny suite or office space located above a garage or in place of a garage.
- g) On narrow lot, higher density residential areas, i.e. around Hamlet Centres, encourage shared driveways along a common side property line.

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- h) To blend into a streetscape/cluster of typical larger single family residences, consider designing duplex, triplex, and fourplex developments to have the appearance of one larger residence.
- i) On larger lots within single family areas, consider the development of larger “mansion” style residences that accommodate 4 to 6 strata units, each with direct access to grade and a garage off a lane.
- j) Townhouse developments should be integrated with other forms of housing within the same block, and are encouraged to front onto streets rather than onto internal enclaves. The form and character of townhousing developments should be compatible with neighbouring residential scale and should reflect the design variety of its context.
- k) Low rise apartment developments should include underground parking to maximize landscape areas, and should be limited in length of facades to maintain a village scale.
- l) To provide “eyes on the street” surveillance and to promote social interaction amongst residents, living environments of housing should be oriented towards front yards, with garage doors located from a rear lane or from the rear of the house.
- m) Designated home office uses are permitted only in residential units or accessory buildings with direct access to grade.
- n) To maintain the natural forested appearance of the area, existing trees should be retained wherever possible. Buildings should be designed to accommodate existing trees on development sites.



7.5 DESIGN GUIDELINES FOR PARKS

- a) Park stewardship programs should be encouraged, and may be integrated with other community-based programs such as Neighbourhood Watch.
- b) All parks, open space and public areas should be designed with CPTED principles in mind. Safety should be determined on a site by site basis, with consideration of issues such visibility, wildlife, environment, and lighting.
- c) All parks and open space design is to be in accordance with the requirements of the Maple Ridge Master Plan for Parks, Recreation and Culture.





8.0 DEVELOPMENT CONTROLS

8.1 OBJECTIVES

8.2 GENERAL DEVELOPMENT CONTROLS

- a) All residential buildings will be subject to Floor Space Ratio (FSR) limitations and building envelope restrictions.
- b) All development applications will be subject to the requirements and regulations of the Subdivision and Development Bylaw, the Zoning Bylaw, and Development Permit Designations for the District of Maple Ridge.

8.3 HOME BASED BUSINESSES

- a) Home based businesses are an integral part of the Maple Ridge economy and will be encouraged in Silver Valley in order to help create a more self-sustaining community, lessen traffic and commuting and assist Maple Ridge in achieving goals of building “complete communities” articulated in Metro Vancouver’s Regional Growth Strategy.
- b) Efforts will be undertaken to ensure that home based businesses minimize public concerns regarding:
 - The adverse impact of these businesses on adjacent homes and the quality of Silver Valley neighborhoods. For example, no alterations of homes will be permitted that adversely change the character of the dwelling.
 - Unfair competition with businesses in established commercial areas.
 - Public safety, i.e., increase in noise, lack of security from people entering multiple family developments and hours of operation.
 - Loss of business licence revenues from unlicensed businesses.
- c) The type of home based businesses permitted in Silver Valley will be determined by a performance-based approach, giving consideration to performance criteria such as:
 - Noise: home based businesses that generate noise levels that exceed that normally found in a residential area will not be permitted.
 - Traffic: outside of the commercial area, home based businesses that create adverse car traffic in neighborhoods will not be permitted. There will be less restrictions in and adjacent to the commercial core.

- Hazardous materials: the predominance of service and office-oriented occupations in commercial live/work makes it less likely that hazardous materials will be in use. However, there will be restrictions on home based businesses that deal in hazardous materials.
 - Number of employees: The number of employees allowed in home based businesses in the commercial core will be greater than businesses in residential areas where there may be restrictions on the number of non-family plus total number of employees allowed.
- d) Home based businesses will be particularly encouraged in and adjacent to the Silver Valley commercial area.
- Larger and more prominent signage will be considered than in other Silver Valley residential neighborhoods.
 - There will be less restriction on the number of employees permitted in home based businesses than in other Silver Valley residential neighborhoods.
 - Limited retail sales plus personal service home based businesses will be permitted in and adjacent to the Silver Valley commercial area, but size will be limited by the need to limit adverse impacts on commercial businesses in the commercial area. Outside of the commercial area, no goods may be displayed or sold on the premises except those that are made on the premises.





9.0 INFRASTRUCTURE AND SERVICING

9.1 STORMWATER MANAGEMENT

9.1.1 PRINCIPLES

- a) Observe current and anticipated best management practices, including, but not limited to:
 - retention of native top soil
 - minimal interception of ground water flow
 - maximizing storm water infiltration
 - minimizing impervious surfaces
 - watercourse base flow maintenance
 - utilization of storm water treatment ponds
- b) development of storm water release rates through continuous simulation modeling of predevelopment stream flows
- c) Develop an integrated storm water management plan.
- d) Maintain predevelopment flow regimes and hydrology throughout the Silver Valley area in the management of storm water.
- e) The objective to limit impervious area to 15% of the total area for Silver Valley.

9.1.2 STORMWATER MANAGEMENT

- a) Maintain riparian corridors by establishing development setbacks and by minimizing road crossings.
- b) Retain stream habitat conditions by:
 - utilizing natural elements for stream enhancement
 - minimizing the number of storm outfalls
 - using bridge type structures at stream crossings
 - maintaining predevelopment aquatic habitat and biotic diversity
 - keeping the same stream regimens
- c) Preserve water quality by:

- controlling street pollutants with sediment/oil collection devices
 - controlling construction sediment/spills
 - maintenance of cool water temperatures through in-ground transport and storage
- d) Manage upland wildlife habitat by:
- protecting bird nesting sites
 - using native vegetation for landscaping
 - retaining upland fallen and woody debris
 - designing stormwater treatment facilities to be wildlife friendly
- e) Maintain stream base flow regime to predevelopment conditions.
- f) Bypass intermediate storm flows around watercourses wherever possible.
- g) Discharge major storm flows to watercourses.
- h) Utilize regional storm water treatment ponds with designed release rate to stimulate predevelopment stream flows.
- i) Disconnect drain leaders on buildings from the storm drain system and allow stormwater to drain to ground surface or to soak-away pits except in rocky and/or steep slope areas.
- j) Reduce the amount of impervious areas to 15% of the total area for Silver Valley.
- k) Install road side drainage swales with subsurface ground infiltration system except in rocky and/or steep slope areas.
- l) Install conventional drainage collection systems in areas where limited ground infiltration opportunities exist.
- m) Implement sediment control ponds.
- n) Implement oil water separators for drainage from larger impervious areas.
- o) Utilize bridges or open culverts at stream crossings.
- p) Design roads to convey major overland storm flow events for discharge to main watercourses.

9.2 WATER

9.2.1 PRINCIPLES

- a) Community water requirements will continue to be serviced by water supplied in sufficient quantity, quality and pressure.

9.2.2 WATER SUPPLY AND DISTRIBUTION

- a) Greater Vancouver Water District (GVWD) system will continue to supply the water to the Silver Valley area. The water distribution system will be owned, operated and maintained by the District of Maple Ridge.
- b) The closest GVWD supply point is a 900mm diameter main at 232 Street and 124 Avenue.
- c) Main distribution into the area is provided by a 450mm main on 232 Street from 124 Avenue to 132 Avenue, 300mm main on 232 Street from 132 Avenue to 136 Avenue, a 250mm main from 136 Avenue to Silver Valley Road and a 250mm diameter main on 132 Avenue extending east from 232 Street. A second supply will be required from a proposed GVWD main at 127 Avenue and 224 Street, looping along 132 Avenue to connect to the main at 232 Street.
- d) Four pressure zones are proposed to service the area: Zones 275, 400, 560, and 680:
 - i. Zone 275 is the lowest pressure zone and the main zone in the District providing service up to 60m elevation. A GVWD reservoir in the 24700 block Dewdney Trunk Road provides storage.
 - ii. Zone 400 will service from elevation 60m to about 104m. This zone will be supplied by pumping from Zone 275 to a reservoir proposed at 135 Avenue and 242 Street.
 - iii. Zone 560 will provide service from elevation 104m to about 145m. This zone will be supplied by pumping from Zone 400 to a new reservoir.
 - iv. The highest Zone 680 will service between elevation 145m and about 168m. This zone is relatively small and may be pumped from Zone 560.
 - v. Pressure reducing stations at each zone will allow transfer of water from higher zones under emergency conditions.

9.3 SANITARY SEWER

9.3.1 PRINCIPLES

- a) Wastewater will continue to be collected in a sanitary sewer system and transported in a safe and economical manner to a wastewater treatment facility.
- b) All development sites are serviced with a sanitary sewer.
- c) Storm water and waste water are conveyed in separate systems.
- d) Sanitary sewer systems are owned and operated by the District.

9.3.2 WASTEWATER SERVICING

- a) Reported poor soil conditions are not conducive to the implementation of ground disposal systems for wastewater suitable for the proposed types of development.
- b) New neighbourhoods and communities will be serviced with a conventional wastewater collection system owned and operated by the District of Maple Ridge.
- c) Wastewater servicing will generally comply with the servicing concept as developed by UMA Engineering Ltd. and presented in the report “Silver Valley Sanitary Collection Plan – March 1995” adopted to the new community plan.
- d) Mainline sanitary sewers will be constructed to current District standards in both roadways and easements to suit the development.
- e) Servicing for approximately one half of the Silver Valley development area to the south east will be routed to the existing interceptor sewer at 232 Street and 128 Avenue.
- f) Servicing for the remaining area for Silver Valley will be piped to a proposed wastewater pumping station on 136 Avenue east of 224 Street where wastewater will be pumped in a forcemain south across the Alouette River to the existing interceptor sewer on 128 Street.
- g) Offsite disposal will be at the Greater Vancouver Sewerage and Drainage District wastewater collection and treatment system.





10.0 TRANSPORTATION AND TRAFFIC

10.1 REGIONAL CONTEXT

10.1.1 PRINCIPLES

- a) Provide safe and efficient movement of people and goods throughout the region and between the Silver Valley area and the region.
- b) Provide safe, convenient, reliable and economical means of transportation for all sectors of society through transit services.

10.1.2 ROAD AND TRANSIT NETWORK

- a) Regional access to Silver Valley will be primarily routed to 232 Street from Lougheed Highway (east and west) and Dewdney Trunk Road (from the east).
- b) Fern Crescent/132 Avenue will continue to provide regional access to Golden Ears Park.

10.2 LOCAL CONTEXT

10.2.1 PRINCIPLES

- a) Provide safe and efficient movement of people and goods throughout the Silver Valley area with particular attention to mobility for pedestrians and cyclists.
- b) Promote safety in residential neighbourhoods by reducing traffic speed.
- c) Design transportation infrastructure to be environmentally friendly in keeping with best management practices.
- d) Provide and improve safe, convenient, reliable and economical means of transportation for all sectors of society through transit services.

10.2.2 ROAD NETWORK

- a) Implement improvements to local area transportation network to service new neighbourhoods and communities as development occurs.

- b) Include all forms and modes of travel in the transportation network and implement standards that promote safe and efficient modes.
- c) Promote traffic calming road design in residential neighbourhoods to slow traffic.
- d) For the short term, continue to provide access to Silver Valley from 232 Street.
- e) For the longer term, provide an east-west transportation access along an upgraded 132/128 Avenue route and a second access to the western portion of Silver Valley along a new 136 Avenue route.
- f) Extend the width of 232 Street to four lanes north to 132 Avenue as Silver Valley develops.
- g) Explore the potential of a future extension of 132 Avenue west of 232 Street and a bridge crossing to improve access to the Silver Valley area and to provide some relief to peak traffic volumes west of the North Alouette River.
- h) Consider the extension of 240 Street north to include a bridge across the Alouette River as the eastern portion of Silver Valley develops.
- i) Explore the possibility of the east extension of 128 Avenue and a future bridge crossing across the Alouette River in the final stages of the development of Silver Valley.
- j) Construct transportation corridors utilizing best management practices.

10.2.3 TRANSIT

- a) Provide new transit routes along 240 Street and 128 Avenue to link neighbourhoods as demand and need arises.
- b) Maintain the existing transit route on 232 Street and integrate into new neighbourhoods as development occurs.
- c) Establish and integrate future transit routes along 128 Avenue and 240 Street to service new neighbourhoods.

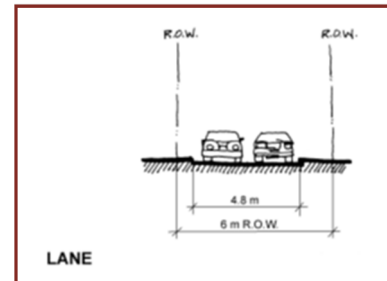
10.2.4 ROADS AND LANES

- a) Design roads to co-exist with bike and horse trails.
- b) Adapt roads to topographic features and to minimize site impacts.
- c) Utilize narrow roads where possible to provide for traffic calming and to preserve rural character.
- d) Adopt road standards that are topographically sensitive, ecologically friendly, and that accommodate larger community building principles rather than the needs of the automobile.
- e) Create numerous and diverse linkages throughout the neighbourhoods. Avoid dead-end cul-de-sacs.
- f) Provide rear lanes wherever possible to create access for on site parking, garages, and secondary dwelling units.
- g) Adopt lower levels of illumination and innovative lighting designs for the street lighting wherever possible.

10.2.5 ROAD CLASSIFICATION, STANDARDS, AND MAINTENANCE REQUIREMENTS

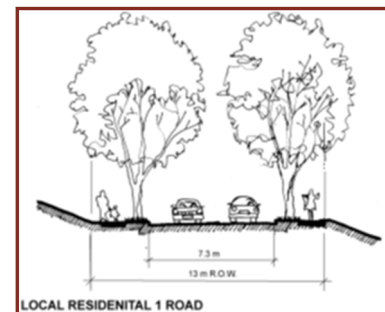
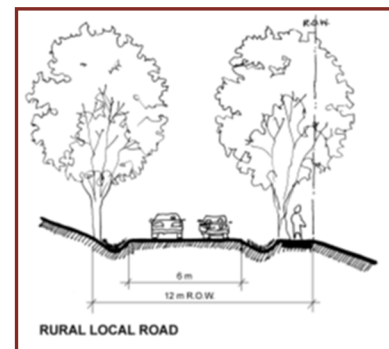
a) Lanes are narrow roads that provide vehicular, fire and emergency access to the rear of homes and commercial areas. Limited pockets of parking are permitted. Lanes are dedicated within a 6m R.O.W. and should have the following characteristics:

- 4.8m paved surface
- surface paving material should be asphaltic concrete or interlocking pavers
- a centre swale complete with drainage collection system to in ground disposal system or to regional treatment pond
- shoulder grassed or paved to adjacent hardscape or building face
- maintenance of drainage system and lane, grassed or planted shoulder



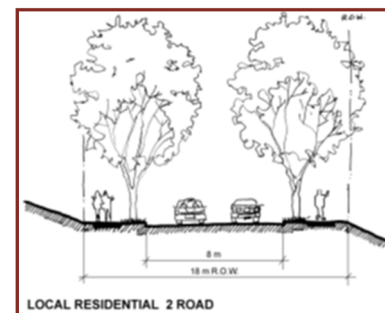
b) Rural Local Roads provide linkages within Eco-Clusters and are rural in character. This road type is adaptable to site topography and relatively narrow, which requires pockets of limited parking and slower speeds. Rural Local Roads may be dedicated within a minimum 12m R.O.W., subject to providing sufficient space for all utilities, and should have the following characteristics:

- 6 m paved width
- surface paving material to be asphaltic concrete with grassed gravel shoulder
- shallow grassed drainage swale on each side of the road with subsurface collection and ground dispersion system tied to a conventional storm drainage system for discharge to a treatment pond
- limited streetlighting
- regulated discharge of storm water to natural watercourse
- maintenance of subsurface drainage system, grassed swale, and road shoulder

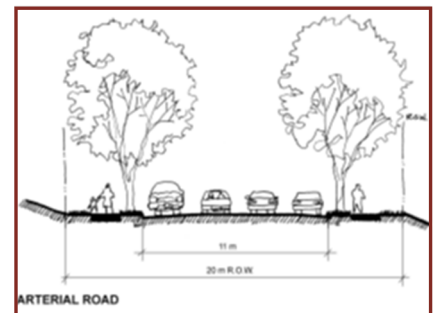
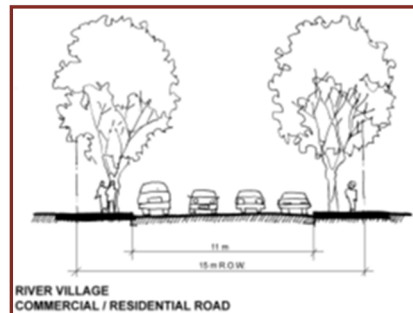


c) Local Residential 1 roads provides linkage between Eco-Clusters and into Hamlets. They are limited in speed, rural in character, and front onto single family residential lots 1000m² or more in area. Local Residential 1 roads are dedicated within a 13m R.O.W. and have the following characteristics:

- 7.3m paved width
- limited parking on one side only in specific areas with larger lots



- d) Local Residential 2 roads are rural in character and front onto lots 1000m² or less in area. They are limited in speed and include traffic calming features. Local Residential 2 roads are dedicated within a 18m R.O.W. and have the following characteristics:
- 8m paved width
 - parking on both sides
- e) Local Collectors are collectors for local residential roads (i.e. 232 Street north of 132 Avenue) and provide main access to the Hamlets and neighbourhoods, though still rural in character. Local Collector roads are dedicated within a 20m R.O.W. and have the following characteristics:
- 8m paved width
 - same shoulder, drainage system, swale, treatment system and maintenance requirements as Rural Local Roads
 - parking on one side



- f) Village Commercial/Residential Roads service River Village core areas and are village in character. This road type is associated with higher density residential areas and is limited to two lanes of traffic. Village Commercial/Residential roads may be dedicated within a minimum 15m R.O.W., subject to providing enough space for all utilities, and should have the following characteristics:
- 11m paved width
 - surface paving material to be asphaltic concrete or concrete pavers
 - constructed to suit the architectural character of the area
 - road edge defined by concrete curb and gutter
 - sidewalks surface finish to be pavers or concrete or a combination of both
 - conventional storm drainage collection system with catch basins and possible oil water separator system
 - discharge of storm water to a treatment pond
 - street lighting to suit village character
 - maintenance of storm drainage and treatment system
 - parking on both sides

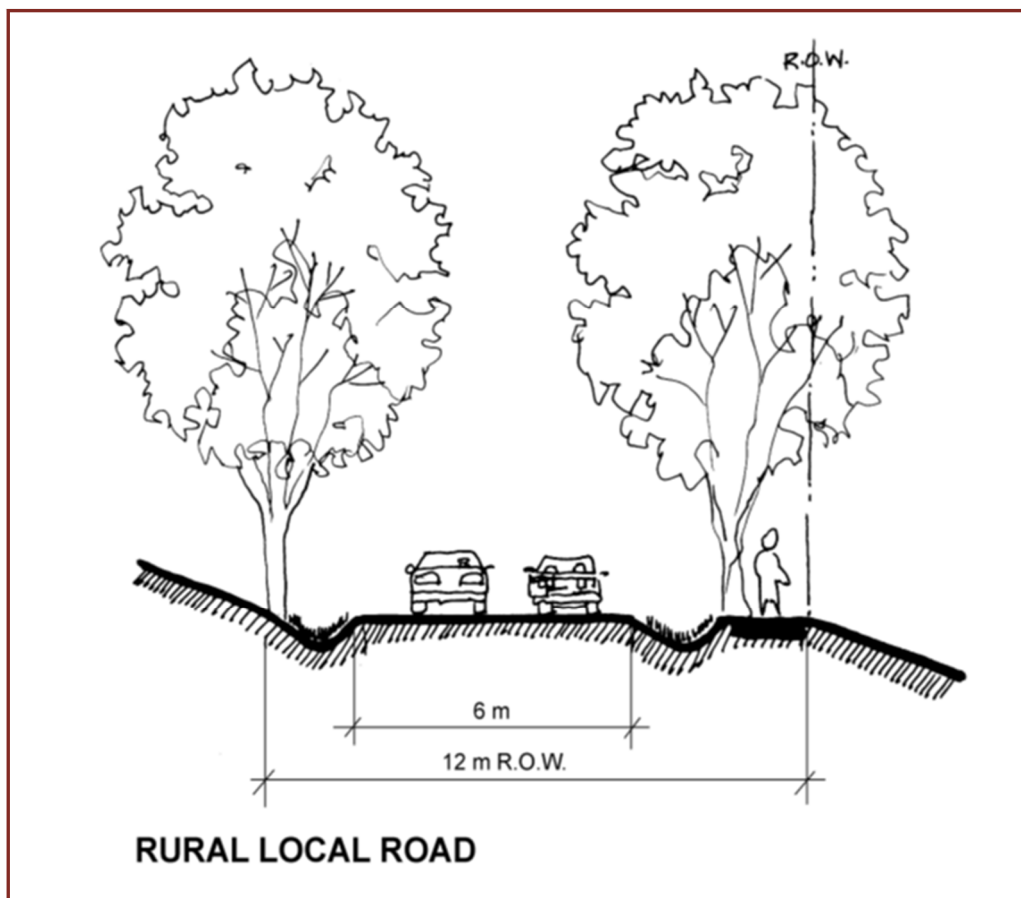
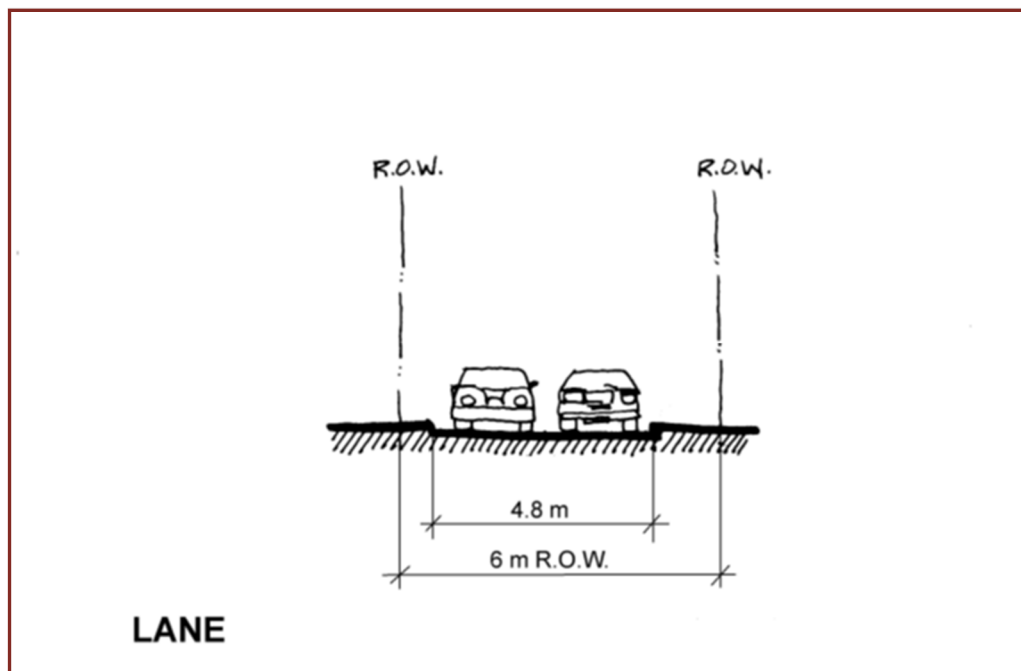
g) Arterial Roads provide main access to and from the Silver Valley area. Assuming these roads pass through rural areas, they are envisioned as two lanes with limited parking in pockets. Arterial Roads are dedicated within a 20m R.O.W. and have the following characteristics:

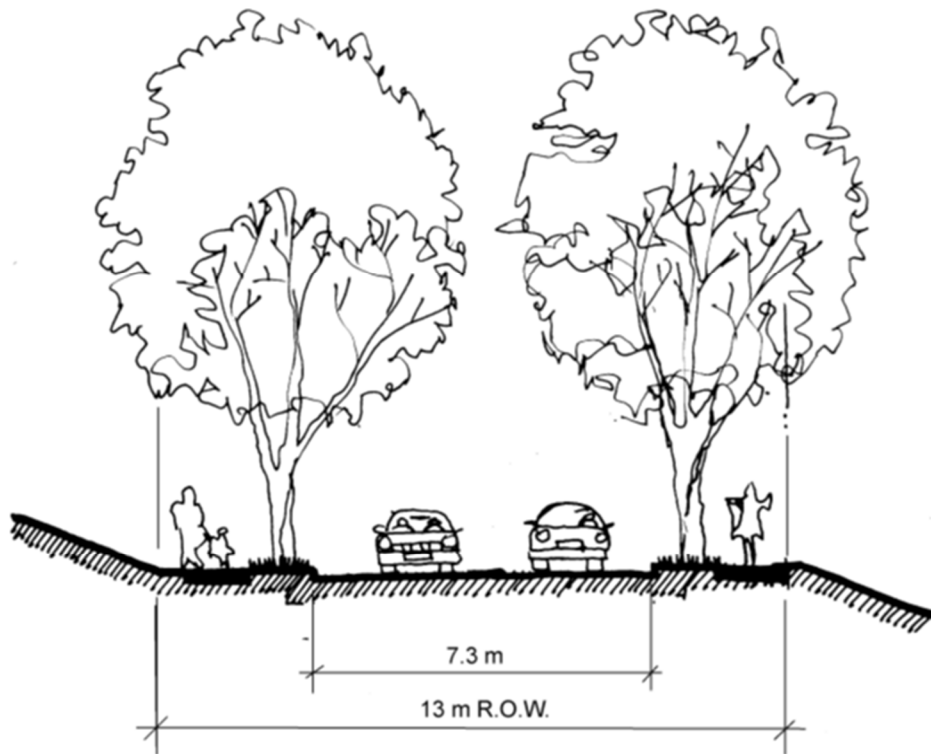
- 8m paved width for traffic
- 11m paved width with parking
- surface paving material to be asphaltic concrete pavement
- gravel shoulders
- drainage ditches on each side
- meandering trails and pathways within the R.O.W. and separated from the road edge with a planted or natural boulevard
- lighting and signalization of main intersections



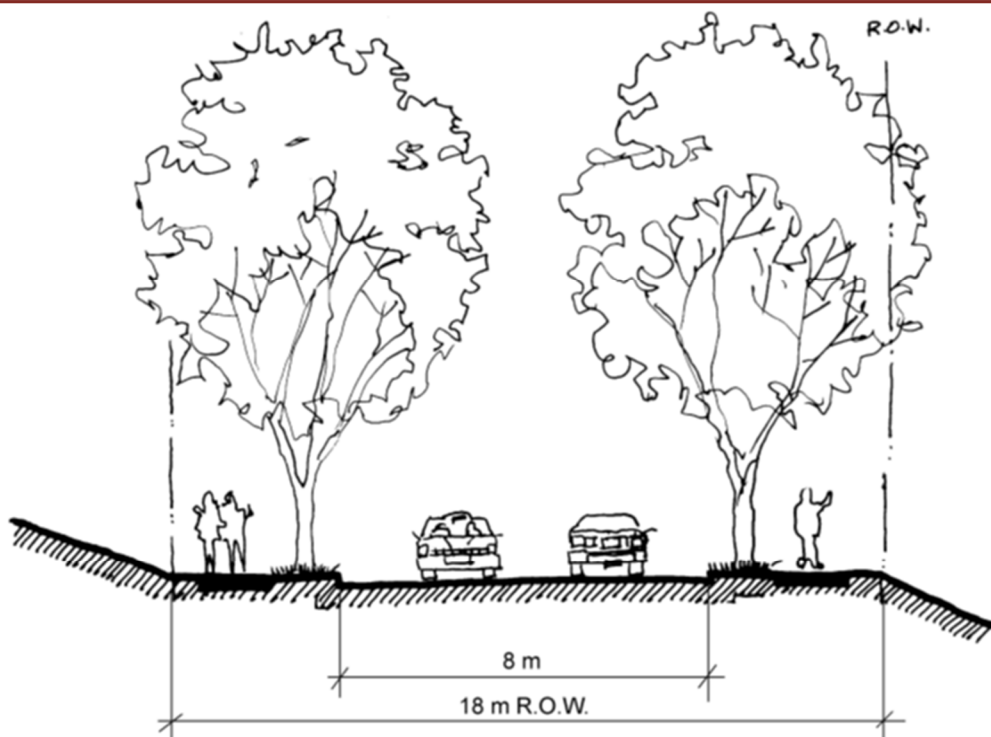


ROAD SECTIONS





LOCAL RESIDENTIAL 1 ROAD



LOCAL RESIDENTIAL 2 ROAD

