

NO: **R087**

COUNCIL DATE: **April 23, 2012**

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **April 23, 2012**

FROM: **General Manager, Planning and Development
General Manager, Engineering**

FILE: **6520-20 PKS/4**

SUBJECT: **Anniedale-Tynehead NCP - Stage 2 Final Report**

RECOMMENDATION

The Planning and Development Department recommends that Council:

1. Approve the Neighbourhood Concept Plan (the "NCP") for Anniedale-Tynehead as contained in Appendix I;
2. Approve the amenity contributions specified in the NCP for supporting the development of and for providing services, amenities and facilities for the Anniedale-Tynehead neighbourhood;
3. Instruct the City Clerk to introduce the necessary by-law to amend Surrey Zoning By-law, 1993, No. 12000 (the "Zoning By-law"), as documented in Appendix II, to include amenity contributions for the Anniedale-Tynehead, based upon the density bonus concept; and
4. Instruct the City Clerk to introduce the necessary by-law to amend the Surrey Land Use and Development Application Fees Imposition By-law, 1993, No. 11631 (the "Fees Imposition By-law"), as documented in Appendix III of this report, to require the payment of additional application fees to allow for the recovery of the costs of preparing the NCP for the Anniedale-Tynehead area.

PURPOSE

The purpose of this report is to advise Council about and obtain Council approval for the:

- complete and final NCP for the Anniedale-Tynehead area;
- adjustments made to the approved Stage 1 Land Use Plan for Anniedale-Tynehead; and
- funding mechanisms for amenities proposed for the Anniedale-Tynehead NCP area and the associated Zoning By-law amendment.

A report, under separate cover, from the Engineering Department describes the servicing and infrastructure funding arrangements associated with the development concept contained in this report.

BACKGROUND

The Anniedale-Tynehead NCP area is bounded by Highway 1 to the north, 168 Street to the west, Harvie Road to the east and lands in the Agricultural Land Reserve ("ALR") to the south. It contains about 374 individual properties and includes an area of 408 hectares (1,008 acres) of land. The entire NCP area is currently designated Suburban in Surrey's Official Community Plan ("OCP"), and the majority of properties in the area are zoned One-Acre Residential (RA).

In March 2009, Council considered Corporate Report No. R034 and authorized staff to prepare a Terms of Reference for the preparation of an NCP for the Anniedale-Tynehead NCP. To initiate the planning process, a public open house was held on May 11, 2009 and a Citizen's Advisory Committee ("CAC") was formed.

With input from the CAC and agencies such as Translink, Ministry of Transportation & Infrastructure (MoTI), Fortis BC, BC Hydro, Ministry of Agriculture and Lands, and the Surrey School District, two draft land use options were developed and, subsequently, presented at a public open house on November 25, 2009. Based, in part, on input from the open house, a preferred land use option was developed and subsequently presented at another public open house held on June 9, 2010.

On October 4, 2010, Council considered Corporate Report No. R212 and approved the Stage 1 Land Use Plan for the Anniedale-Tynehead NCP (Appendix IV) and authorized staff to proceed with the Stage 2 detailed planning and engineering work for the NCP.

On October 5, 2011 an open house was held to present the draft Stage 2 Land Use Plan and the engineering, financing and phasing strategy for the NCP.

DISCUSSION

Overview of the Proposed Stage 2 Land Use Concept Plan

The proposed Stage 2 Land Use Concept Plan (attached as Appendix V) features a mix of land uses, including a range of residential housing densities, commercial uses and related plaza areas, industrial uses and business park areas, a community centre, neighbourhood parks, trail and pathway networks, riparian areas and a site for each of three elementary schools.

A wide range of residential densities are proposed in the plan, ranging from apartments and townhouses to single-family dwellings. The highest densities are located in the northern portion of the plan, close to future transit routes along 96 Avenue and 94A- Avenue (Ridgeline Drive). The residential densities decrease moving southward towards the ALR and westward toward the Serpentine River. Cluster Housing designations have been proposed in key areas of the plan to allow for the retention of valuable tree stands and wildlife connectivity.

Three neighbourhood commercial areas are proposed in the NCP. These commercial areas are located at:

- 96 Avenue and 168 Street;
- 180 Street and 93A- Avenue; and
- 184 Street and 92 Avenue.

The commercial area at 96 Avenue and 168 Street will incorporate heritage aspects into the development. All three commercial areas will include a public plaza, public seating, public art features, and a central open space to accommodate public gatherings or farmer's markets.

A large scale, regional shopping centre is proposed on the south side of 96 Avenue, to the west of Highway 15. This designation was proposed at this location because the site has good visibility from Highway 15 and Golden Ears Way. This commercial centre will include public gathering and amenity spaces at key locations in the development as well as a "main street" commercial area within the site. Specifics of the design requirements are outlined in the Design and Development Guidelines contained in Section 1, Part 3 of the NCP Document (Appendix I).

A community centre is proposed along 93 A- Avenue (Ridgeline Drive) to the west of 180 Street. Situated along a street with future high-density residential uses, a future bus route, and planned commercial and live/work areas, this community centre will be at the heart of the community.

Seven neighbourhood parks and one community park are proposed to provide residents with recreational areas that offer both active and natural recreational space. The community park, located at 184 Street and 92 Avenue, will provide playing fields, a water park, a playground, a dog off leash area and a youth park, all connected by trails and greenways. Detailed planning of this park and other neighbourhood parks in the NCP will be subject to consultation with the future residents of the NCP.

The NCP trail network, having a length of over 9 kilometres in the NCP, connects three existing trail systems outside the plan area, the Tynehead Perimeter Trail, the Green Timbers Greenway, and the Golden Ears Greenway. The NCP trail system will accommodate a range of users, provide seating areas, include signage and trail markers at key points, and offer significant views out to the ALR to the south.

A major riparian area is located along the Serpentine River on the westerly side of the plan area. Other riparian areas are located in three park areas, and cluster residential areas.

Three separate elementary school sites are proposed in the plan area. These sites have been co-located with neighbourhood parks and in one case the community centre to allow for the sharing of amenities.

Entrance features are planned in three areas of the plan. One will be located at 172 Street and 96 Avenue to mark the entrance into Tynehead Park, another at 176 Street and 96 Avenue at an entrance into the northern end of neighbourhood, and the third feature at 184 Street and 90 Avenue will be at the southern entrance into the community park.

The overall street system of the plan is based on a grid pattern to promote connectivity for pedestrians, cyclists, and automobiles. Two overpasses, one across Golden Ears Way and one across Highway 15, are proposed to provide east-west connectivity across the plan area, and to maintain efficient regional traffic movement along each of Golden Ears Way and Highway 15.

A series of drainage ponds are located along the southern and northern boundaries of the plan area. These ponds will also serve as an amenity for the community.

Consultation Components

An integrated, multi-stakeholder approach to the planning process was used to arrive at the preferred development concept and the Stage 1 Land Use Concept, which formed the basis for the Stage 2 Land Use Concept Plan. The following consultative initiatives were used:

The Anniedale-Tynehead Citizen Advisory Committee

A CAC was established early in the NCP planning process. The goal of the CAC was to bring local knowledge and community concerns to the planning process and to involve residents in addressing these concerns.

The CAC included 13 property owners (or representatives of property owners) and two association members within the plan area, along with representatives of the surrounding neighbourhoods. The CAC met monthly through Stage 1 of the planning process to provide input into the development of the Land Use Concept, and at key points during Stage 2 as Engineering servicing and financing strategies were being developed.

Public Meetings

Public meetings/open houses were held at key milestones during the NCP plan process to provide opportunities for interested parties to comment on the preferred development concept and utilities and transportation infrastructure.

Interagency Meetings

Meetings with external agencies were held throughout the planning process. Representatives from Translink, MoTI, Ministry of Agriculture & Lands, BC Hydro, Fortis BC, and the Surrey School District participated in these meetings.

Meetings with Committees of Council

The plan was also presented to various Committees of Council, including the Environmental Advisory Committee, Agricultural Advisory Committee, and the Heritage Advisory Commission.

Modifications to the Stage 1 Land Use Concept Plan

While the proposed Stage 2 Land Use Plan is similar to the approved Stage 1 Land Use Concept Plan, a few key changes have been incorporated into the Stage 2 Plan. A number of outstanding issues were to be resolved prior to Stage 2 completion; some of these issues involved modifications to the Stage 1 Land Use Plan.

The major changes between the Stage 1 Land Use Plan (Appendix IV) and the proposed final Stage 2 Land Use Plan (Appendix V) are described below. The area identified in the heading of each of the following sections in this report is highlighted in the attached plans.

Transportation Changes (Appendix VI)

Key changes to the transportation elements of the plan relate to the reduction in the size of the footprint for the future interchange at Golden Ears Way and Highway 15 and a re-alignment of Lakiotis Ridge Drive.

Reduction in the Footprint for the Interchange

The transportation work completed as part of the Stage 1 planning process established the need for a future grade-separated interchange at Highway 15 and Golden Ears Way and proposed a general design based on previous design work. The engineering work completed as part of the Stage 2 planning process examined design options for the proposed interchange in detail. This review established that the ramp radii could be reduced, which has resulted in a reduction in the area of land required for the proposed interchange in comparison to the Stage 1 land area estimation (Area "A" on Appendix VI).

Re-alignment of Lakiotis Ridge Drive

The alignment of Lakiotis Ridge Drive (90A Avenue) has been adjusted to improve the future road grades and to allow for the elimination of a pump station at 180 Street. The new road alignment (Area "B" on Appendix VI), follows the contour line along the southern slope and allows for reduced steepness in road grades in comparison to the previous alignment that was proposed in the Stage 1 Land Use Concept.'

The new location of the road allows a sanitary pump station to be situated at a lower elevation than the Stage 1 Plan proposed. This change in elevation allows expansion of the sanitary catchment, which removes the need for a second pump station at 180 Street.

Additional Park and Community Centre Location (Appendix VII)

Community Centre on 93A-Avenue

The Stage 1 Plan showed an approximate area for a future community centre for the Anniedale-Tynehead neighbourhood. The analysis shows that a facility size with a floor area of approximately 1,860 square metres (20,000 square feet) is appropriate and that a one-hectare (2.5-acre) site is needed to accommodate such a facility. Collocating the community centre with a school site allows opportunity for shared parking and other amenities.

The location of the Community Centre is illustrated on the Stage 2 Land Use Plan (Area "C" on Appendix VII).

Pocket Park at 173A- Street south of 96 Avenue

An additional playground site has been added to the plan at 173A- Street, south of 96 Avenue (Area "D" on Appendix VII).

This site is ideal for a pocket park for the following reasons:

- it is adjacent to a site with a creek, which enhances wildlife connectivity between Tynehead Park and the Serpentine River;
- it is centrally located and within walking distance of the high residential densities;
- it will connect with the planned greenway along the northerly side of the property; and
- it is not heavily treed and is fairly flat, thus allowing for a playground and other programming without significant loss of existing trees.

Industrial Land Use Changes (Appendix VIII)

The Stage 1 Plan showed the northern side of the plan as an "Industrial Designation" due to its close proximity to Highway 1, Golden Ears Way and Highway 15. Business Park uses were considered; however, there was concern that increasing the land-use intensity in this area, which is bordered by Highway 1, Highway 15, and Golden Ears Way (the "triangle", shown as Area "E" on Appendix VIII) would not be supportable due to the limited means of access to the area from the surrounding major roads and the potential impact on the efficient flow of local and regional traffic on these roads.

The access in-and-out of the triangle area is very limited. There is currently one intersection at 180 Street and Golden Ears Way, and there is a planned access point to the east of 182 Street. With access only at these locations, higher intensity land use, such as Business Park or Commercial, generate higher traffic volumes that exceed the capacity at the access points to the area from Golden Ears Way and the 180 Street intersection. As a result, the land uses within the triangle are designated "Industrial".

The land outside of the triangle (Area "F" on Appendix VIII) that was designated in the Stage 1 plan as "Industrial" has been changed to a "Business Park" designation in view of its location and available access.

Neighbourhood Commercial Area Change (Appendix IX)

The Neighbourhood Commercial centre proposed at 168 Street and 96 Avenue has been increased in area (Area "G" on Appendix IX) to allow for improved development potential on the site.

The Tynehead Community Hall is currently located on a property near the southeast corner of 168 Street and 96 Avenue. The Hall is listed on the Surrey Heritage Register and protected by a Heritage Designation By-law. Redevelopment of that site would require that the heritage building be incorporated into the overall site plan. However, the small area of the site poses challenges for effective traffic circulation and required parking for commercial development. As a result, the adjacent site to the east has been included in this Neighbourhood Commercial centre.

School Size Adjustments (as shown on Appendix X)

New full-day Kindergarten, Early Childhood Development requirements and Neighbourhood Learning Centre requirements, as prescribed by the Ministry of Education, have dictated the need for additional land area for each of the future school sites in the plan area. The school sites in the plan area have been adjusted in this regard. Each of the future school sites has been increased in area from 2 hectares (5 acres) to 3 hectares (7.5 acres). Appendix X highlights the revised future school site areas shown as Areas "H, I and J".

Residential Land Use Changes (as shown on Appendix XI)

Cluster Residential 4-6 upa

The land along the Serpentine River was designated as "residential two units per acre" in the Stage 1 Plan. Most of this land is located within the 200-year floodplain of the River and is not protected by a dyke. Up to five metres of fill is required in some locations to allow re-development. A concern was identified that such large fill amounts could negatively impact the Serpentine River.

During Stage 2, further analysis of fill requirements was conducted to assess if increased density could be supported in this area. The analysis showed that the lands to the east of the River were situated at higher elevations (Area "K" on Appendix XI) than the lands to the west of the River. In addition, the most easterly portions of this land area (close to Bothwell Drive) are above the floodplain elevation. Consequently, the lands to the east require less fill to accommodate future development. In response, densities for properties to the east of the Serpentine River have been increased from two units per acre to 4 to 6 units per acre. Lots on the west side of Serpentine River will need larger amounts of fill to establish elevations above the floodplain level; therefore, they are not suitable for increased density.

Special Residential 15-25 upa

To strengthen the character of the "main street" theme along 93 Avenue (Ridgeline Drive), a "Special Residential" designation has been added to the townhouse designation (Area "L" on Appendix XI). Other uses along this street include a future recreation centre, high-density apartments, townhouses, and a neighbourhood commercial centre.

The Special Residential is intended to allow 30% of the floor area at the street level to be converted to small-scale retail and office uses in a live-work environment. This type of use will allow opportunity for small business, small office and service uses. These kinds of uses will contribute to a "main street" feel and a strong neighbourhood heart.

Placemaking and Neighbourhood Identity

During the Stage 1 Plan process, the concept of placemaking was incorporated into the NCP by means of several approaches. The land use plan identified areas for plazas and public gathering spaces; heritage buildings were identified, including strategies for preservation and commemoration; and areas with views of the agricultural lowlands to the south and the mountains to the north were identified. Placemaking elements were further refined during the Stage 2 planning process.

View Opportunities

One of the most unique assets in the plan area is the views of the natural environment, including the mountain range to the north, the treed escarpment on the south side of the plan area, and views of the low land agricultural areas to the south. Specific view corridors and view sheds have been defined and are shown in Appendix XII.

Protecting and highlighting these views will ensure the unique neighbourhood identity is not lost through redevelopment. To protect the treed escarpment area, specific hillside development requirements have established and are outlined in Part 4 Escarpment Development Guidelines of Appendix I.

Place Names

To reinforce the unique identity of the Anniedale-Tynehead neighbourhood, staff may recommend naming certain streets in the plan area, rather than following the standard street numbering. In particular, streets that offer scenic views or have a curving or discontinuous alignment are proposed candidates for naming. At this time, an overall street naming process has not been conducted, but the NCP document (Appendix I) includes a map showing potential street names for the NCP area. Staff will be developing policy regarding street naming conventions, which will inform the final selection of street names for Council's consideration 1.

Urban Design

Further work has been completed through Stage 2 to incorporate the natural and built history into the future development of the Anniedale-Tynehead area by means of a well-developed set of Urban Design Guidelines. For example, archives showing early settlement in the area identified several sawmills that were located in the plan area. Specifically, the Tynehead Lumber Company and Rideout Sawmill were located on sites that are now designated for future commercial development west of Highway 15.

To build on this historical aspect, and to give the future redevelopment a strong sense of identity, a sawmill and lumber theme will be incorporated into design elements for these commercial areas. Examples of architecture and public realm treatments that incorporate this kind of theme are shown in Appendix XIII.

Land Consolidation

Within the plan area, there are a number of smaller acreage parcels and irregularly shaped lots. In several areas, lot consolidation will be required to ensure efficient development of properties.

These land consolidation opportunities will, in most circumstances, be determined on a case-by-case basis at development application stage. In some cases, however, consolidation requirements have been identified in the Land Use Plan to avoid creating remnant pieces that would not be developable on their own.

Land consolidation areas have been identified to inform developers of the consolidation requirement, to ensure compatibility and feasible development areas, and to achieve an equitable distribution of road dedication and construction costs across properties. These areas have been identified in Section 1, Part 4 of the NCP document (Appendix I).

Land Use Statistics

The following section summarizes the amount of land allocated within the Stage 2 Land Use Plan for each of the different land uses. Also provided is the estimated number of dwelling units, the population of the area and the potential commercial floor area at build out of the land use plan. A table summarizing the land use statistics is documented in Appendix XIV.

Residential

The Stage 2 Land Use Plan provides for 164 hectares (404 acres) of Residential-designated land. The Land Use Plan anticipates between 5,000 dwelling units and 8,000 dwelling units at build out. Based on an average ratio of 2.8 persons per dwelling unit, the build-out population of Anniedale-Tynehead heights will be between 13,887 and 22,108.

Commercial

The Land Use Plan allocates a total of 16 hectares (40 acres) to for Commercial development. At build-out, commercial floor area is estimated at approximately 18,580 square metres (200,000 square feet), based on a floor area ratio varying between 0.3 to 0.6, based on the specifics of each area designated as "Commercial" in the Land Use Plan.

Industrial and Business Park

Land proposed as "Industrial" comprises 32 hectares (78 acres) and those proposed as "Business Park" include an area of 16 hectares (39 acres).

Institutional Uses and Schools

The land designated for institutional uses, such as schools, total 9.7 hectares (24 acres).

Parks and Open Space

Parks, greenways and riparian areas occupy 58 hectares (143 acres) of land within the plan area.

Amenity Requirements

In accordance with City policy, to address the amenity needs of the proposed new development in Anniedale-Tynehead, all development proposals at the time of rezoning or building permit issuance will be required to make a monetary contribution toward the provision of new police, fire protection and library services and toward the development of the parks, open spaces and pathways.

The monetary contributions toward police, fire and library materials will offset the capital costs of providing these services to the new development and are applied on a standardized basis in all of Surrey's NCP areas. The monetary contributions toward parks, open spaces and pathway development are based upon an estimate of the capital costs of these improvements for this particular NCP area. The total cost is divided by the anticipated number of dwelling units and acreages in the case of non-residential development to ensure an equitable contribution arrangement.

Parkland Development

The Anniedale-Tynehead community will contain six neighbourhood park sites, and several riparian areas and trails. The open space areas include the Lakiotis Ridge Trail, Green Timber Greenway, and a proposed trail along the Serpentine River.

Entrance features are planned in three areas of the plan. One will be located at 172 Street and 96 Avenue to mark the entrance into Tynehead Park, another at 176 Street and 96 Avenue as an entrance into the northern end of the neighbourhood, the third feature at 184 Street and 90 Avenue as the southern entrance into the community park.

The estimated cost of developing park and related amenities in the future Anniedale-Tynehead community is approximately \$8,416,931.00. This results in a contribution of \$1,294.91 (in 2012 dollars) per dwelling unit.

Library and Library Materials

A study of library requirements in Surrey's new neighbourhoods has established that a contribution of \$141.15 (in 2012 dollars) per dwelling unit (non-residential development is exempt) is necessary to cover the capital costs for library materials and services, which are sensitive to population growth. As such, a total of approximately \$917,475.00 will be collected from Anniedale-Tynehead towards materials such as books, computers and CDs for libraries that will serve the area.

Fire and Police Protection

Future development in this neighbourhood will drive the need to upgrade existing fire and police protection facilities. A study of fire protection requirements in Surrey's new neighbourhoods has established that a contribution of \$271.01 per dwelling unit and \$1,084.07 per acre of non-residential development (in 2012 dollars) will cover the capital costs for fire protection. A contribution of \$62.74 per dwelling unit and \$250.90 per acre of non-residential development (in 2012 dollars) will cover the capital costs for police protection. This will result in a total capital contribution from Anniedale-Tynehead of approximately \$2,032,582.50 toward fire protection and \$470,535.00 toward police protection.

Summary of Funding Arrangements

A summary of the applicable amenity contributions (per dwelling unit or hectare/acre depending on land use) and the estimated revenue that will be generated from the Anniedale-Tynehead NCP area are documented in the following table:

ANNIEDALE-TYNEHEAD NEIGHBOURHOOD CONCEPT PLAN AMENITY CONTRIBUTIONS			
	Per Unit Contribution All Residential <i>Approx. 6500 dwelling units (@ base densities)</i>	Per Acre Contribution All Non-Residential <i>Approx. 250 acres (101 ha.)</i>	Anticipated Total Revenue at Build Out
Police Protection	\$62.74 per dwelling	\$250.90 per acre	\$470,535.00
Fire Protection	\$271.01 per dwelling	\$1,084.07 per acre	\$2,032,582.50
Development of Park/Pathways and Placemaking Features	\$1,294.91 per dwelling	n/a	\$8,416,915.00
Library Materials	\$141.15 per dwelling	n/a	\$917,475.00
Total Contribution (per unit or per acre)	\$1,769.81 per dwelling	\$1,334.97 per acre	
Anticipated Total Revenue			\$11,837,507.50

The above-noted "per unit" amenity contributions are derived from estimated base densities in each of the residential designations, which have been translated into a number of anticipated dwelling units (excluding any coach houses and secondary suites) (Part 9 of Appendix I). The estimated costs of the various amenities are distributed evenly to each dwelling unit. Therefore, if the number of dwelling units in a proposed development is lower than that anticipated by the NCP, the applicant will be expected to "top up" the amenity fees based on the number of the dwelling units used to calculate the amenity charge to ensure that there is no shortfall in the funding for the proposed amenities.

Implementation of the NCP

OCP Amendments

The entire area covered by the Anniedale-Tynehead NCP is currently designated Suburban in the OCP. Although the NCP Land Use Plan anticipates changes to the OCP designations in Anniedale-Tynehead, the determination of the precise boundaries of these changes cannot be established until a detailed survey plan is presented at the time of development application review. It is, therefore, recommended that any necessary changes to the OCP designations in the Anniedale-Tynehead area proceed concurrently with site specific rezoning applications as has been the City's normal practice in other areas of the City for which NCPs have been approved.

Design Guidelines

In the case of single-family residential developments, the Design Guidelines will be implemented through the process of reviewing and approving subdivision plans and in developing and approving building schemes for each such subdivision. In the case of row houses, town houses, other multiple unit residential developments, and in commercial and industrial developments, the Design Guidelines will be implemented through the process of reviewing and approving the related Development Permit at the time of development application review and approval.

Zoning By-law Amendment

To enact the amenity contribution requirements as referenced above, the Zoning By-law will need to be amended to add Anniedale-Tynehead to the list of NCPs within which monetary contributions are required. The proposed amendments to Schedule G of the Zoning By-law to incorporate the amenity fees for the Anniedale-Tynehead NCP area are documented in Appendix II.

Recovery of NCP Preparation Costs

Several consultants were retained to assist with the preparation of the Anniedale-Tynehead NCP. The cost of the Engineering and Environmental consultant services to the City was \$648,480.00. It is recommended that the Fee Imposition By-law be amended to provide for the recovery of these NCP preparation costs through the payment of application surcharge fees.

The surcharge fee per unit will be based on the anticipated 6500 units at the mid-range density, and will result in a per unit fee of \$86.46. Should the actual number of proposed units fall below the number anticipated on any particular site; the applicant will be required to make up the shortfall in the surcharge fee to ensure the City's NCP preparation costs are fully recovered. For non-residential development, similar to other NCPs, the equivalent application surcharge fee will be based on the lot area at a rate of 10 units per hectare (4 units per acre).

The proposed amendments to Schedule 8 of the Fee Imposition By-law to require the payment of additional application "surcharge" fees to recover the costs of preparing the NCP for Anniedale-Tynehead NCP are documented in Appendix III.

CONCLUSION

A City project team, assisted by consultants and in consultation with property owners, government agencies, utility companies, representatives of the land development industry and the public, has prepared an NCP, including a land use plan and engineering/funding/phasing strategy, for the Anniedale-Tynehead neighbourhood.

The NCP is consistent with the policy framework identified in Surrey's OCP. Strategies have been identified for funding various amenities required for the neighbourhood. Subject to Council's concurrence with the related servicing and financing report from the Engineering Department, and based on the above discussion, it is recommended that Council:

- Approve the NCP for the Anniedale-Tynehead neighbourhood as contained in Appendix I;
- Approve the amenity contributions specified in the NCP for managing the development of and for providing services, amenities and facilities for the Anniedale-Tynehead neighbourhood;
- Instruct the City Clerk to introduce the necessary by-law to amend the Zoning By-law, as documented in Appendix II, to include amenity contributions for the Anniedale-Tynehead neighbourhood, based upon the density-bonus concept; and
- Instruct the City Clerk to introduce the necessary by-law to amend the Fees Imposition By-law, as documented in Appendix III of this report, to require the payment of additional application fees to allow the City to recover the costs of preparing the NCP for the Anniedale-Tynehead area.

Original signed by
Jean Lamontagne
General Manager
Planning and Development

PH:saw

Attachments:

Appendix I	Final and Complete Anniedale-Tynehead Neighbourhood Concept Plan Stage 2
Appendix II	Proposed Amendment to Schedule F and G of the Zoning By-law
Appendix III	Proposed Surrey Land Use and Development Fee Imposition By-law Amendment
Appendix IV	Stage 1 Anniedale-Tynehead Land Use Plan
Appendix V	Proposed Stage 2 Anniedale-Tynehead Land Use Plan
Appendix VI	Changes to Transportation Network
Appendix VII	Additional Park and Specific Location of Community Centre
Appendix VIII	Changes to Industrial Areas
Appendix IX	Neighbourhood Commercial Area Change
Appendix X	Adjustments to Size of Proposed School Sites
Appendix XI	Changes to Residential Land Uses
Appendix XII	Views Corridors and View Sheds
Appendix XIII	Examples of Public Realm Treatments Using Sawmill and Lumber Themes
Appendix XIV	Summary of Land Use Statistics



Anniedale-Tynehead

Neighbourhood Concept Plan (NCP)

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- A – Transportation**
- B – Sanitary Sewer**
- C – Stormwater**
- D – Water**

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["Neighbourhood Concept Plan (NCP) land use densities, design guidelines, servicing requirements, transportation designs, parks, and amenity contributions, introduce new requirements at time of development application, along with the provisions for increased neighbourhood, service amenities and development potential."]

REPORT STRUCTURE

This report provides a comprehensive set of plans, policies, designs and regulations to guide future growth and re-development in the Anniedale-Tynehead area of Surrey. The plan is divided into two sections and ten parts:

SECTION 1: PLANNING AND DEVELOPMENT

- PART 1:** The **Introduction** puts the overall plan into context, providing background information on the plan area, previous related studies, study process, opportunities and constraints of the area, and the various public consultation approaches used to identify issues important to the area and stakeholders.
- PART 2:** The **Neighbourhood Concept Plan Objectives** are prepared to provide a framework to the future land use, consisting of Neighbourhood planning principles and sustainable policies to guide development and redevelopment of all properties within the Anniedale-Tynehead community. The plan will provide a guide for the next thirty plus years of growth in the area, and will be subject to amendments and review as needed.
- PART 3:** The **Land Use and Design** includes general land use intent as well as proposed permitted and restricted uses in an area (e.g., public road use, commercial areas, buffers, etc) and selective guiding principles associated with each land uses type. In addition, design criteria that are expected from all developers and builders in planning, designing and constructing new development or projects in Anniedale-Tynehead are also provided. Developers and/or builders will be required to formally demonstrate, through the submission of secondary plan, block plan, subdivision or site plan-specific design documents, how the Design and Development Guidelines are being met, and focus on unique attributes or planned 'character' elements that will heighten the overall design of the plan, and/or site.
- PART 4:** The **Development Guidelines** includes Land Consolidation Strategy, Environmental Management, Cluster Housing, ALR Edge Guidelines and Heritage Policies.

SECTION 2: ENGINEERING, IMPLEMENTATION AND FINANCING

- PART 5:** The **Transportation Infrastructure, Policy, and development** overview and Requirements are contained in the fifth part.
- PART 6:** The **Sanitary Sewers Infrastructure**, Policy and development overview and requirements are contained in the sixth part.
- PART 7:** The **Storm Water Infrastructure**, Policy and development overview and requirements are contained in the seventh part.
- PART 8:** The **Water Infrastructure**, Policy and development overview and requirements are contained in the eighth part.
- PART 9:** The **Community Amenity Contributions, External Utility Agency Comments and Implementation strategy** is contained in the ninth part.
- PART 10:** The **Financing Strategy** for the Anniedale-Tynehead Neighbourhood Concept Plan is contained in the tenth part.

SECTION

PLANNING AND DEVELOPMENT

1

- PART 1:** Introduction
- PART 2:** Neighbourhood Concept Plan Objectives
- PART 3:** Land Use and Design
- PART 4:** Development Guidelines

SECTION 1: PLANNING AND DEVELOPMENT

What is a Neighbourhood Concept Plan (NCP)?

A neighbourhood concept plan is a policy and planning document, endorsed by Surrey City Council, to be considered with future amendments of the Official Community Plan (OCP), Zoning Bylaw and other development Bylaws. The neighbourhood plan is different than the OCP as it does not have bylaw status, but specifically outlines a vision and direction for future urban neighbourhoods with greater detail on:

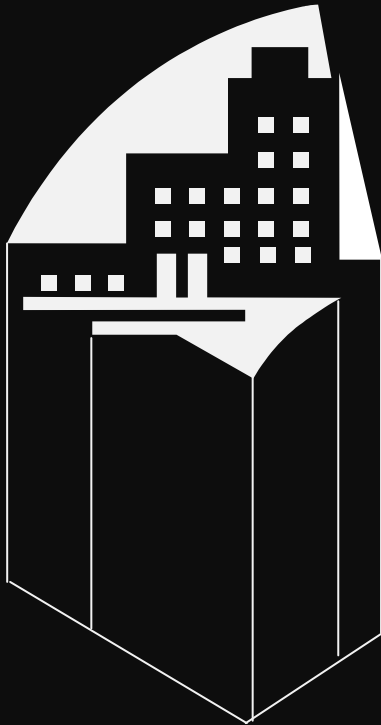
- Land use Policies and Objectives
- Circulation of Transportation network
- Parks and Open Space
- Infrastructure, Amenities and Utility Servicing
- Environmental Protection and Enhancement

In turn, NCPs inform and guide what happens in the planning area with respect to future:

- OCP land use amendments;
- Zoning and rezoning;
- Development permit areas and development guidelines;
- Subdivision and Development;
- Urban Design and Development.

What are the Design and Development Guidelines?

The Design and Development Guidelines provide design criteria that are expected from all developers and builders in planning, designing and constructing new development or projects in Anniedale-Tynehead. In addition, developers and/or builders will be required to formally demonstrate, through the submission of secondary plan, block plan, subdivision or site plan-specific design documents, how the design and Development Guidelines are being met, and focus on unique attributes or planned 'character' elements that will heighten the overall design of the plan, and/or site.



PART 1 INTRODUCTION

- 1.0 Planning Area Introduction and Context
- 1.1 Background Information
- 1.2 Opportunities and Constraints
- 1.3 Planning and Public Consultation Process

PART 1: INTRODUCTION

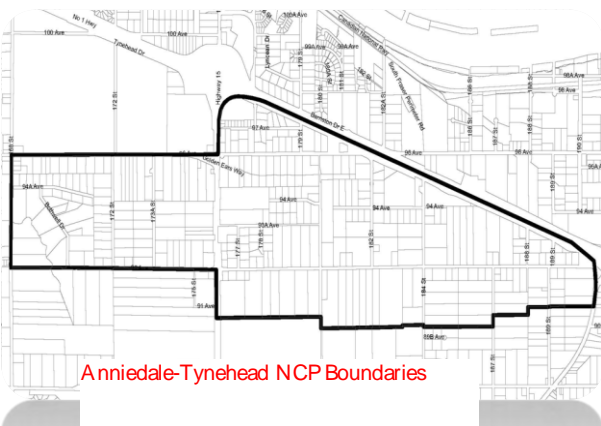
1.0 PLAN AREA INTRODUCTION AND CONTEXT

The Neighbourhood Concept plan area covers approximately 408 hectares (1008 acres) of North East Surrey. The NCP area is generally bounded by Highway 1 and 96 Avenue to the north and 168 Street to the west. The southern boundary is marked generally by the Agricultural Land Reserve (ALR) between 168 and 184 Streets and an approximate alignment with 90 Avenue jogging northward from 184 Street to Harvie Road. The eastern boundary is marked by Harvie Road’s termination at Highway 1.

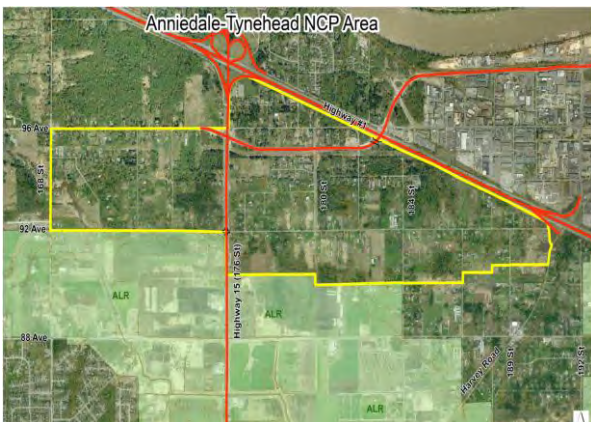
There are approximately 374 individual properties in this NCP area. The current zoning is predominantly One-Acre Residential Zone (RA), and General Agriculture Zone (A-1).

In this part of South Port Kells, four provincial or regional highways come together, making it an area that is unlike any other in the Lower Mainland. The Golden Ears Bridge (GEB) Connector Road, a responsibility of the Greater Vancouver Transportation Authority (TransLink) traverses the area south of 96 Avenue. Under the Ministry of Transportation’s Gateway Program, Highway 1 will be widened and Highway 15 has been improved between 88 Avenue and Highway 1. A connection to the South Fraser Perimeter Road will be provided on the north side of Highway 1, outside of the plan area.

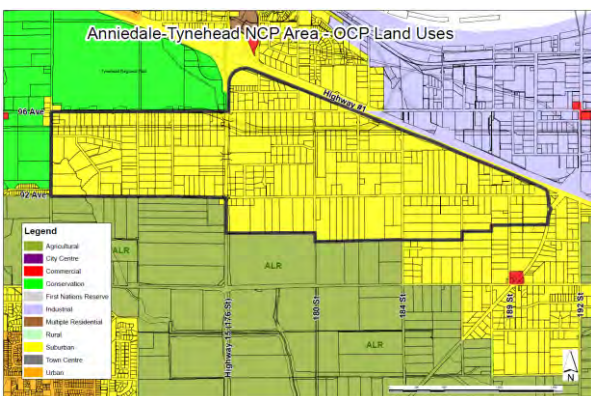
The entire NCP area is designated Suburban in the City of Surrey’s Official Community Plan. This designation provides for a maximum residential density of one unit per acre. The OCP also states that for Suburban designated lands indicated as having potential for urban, commercial, business or industrial development, the minimum lot area for subdivision is 0.8 hectare (2 acres).



Anniedale-Tynehead NCP Boundaries



Plan Area Location and Major Highway Locations



Suburban Lands in the OCP

1.1 PLANNING BACKGROUND AND INFORMATION

On June 13, 2005, Council approved the South Port Kells General Land Use Plan (GLUP) as the basis for preparing future NCPs. The South Port Kells GLUP was then further divided into three distinct neighbourhoods (Anniedale, Port Kells, and Tynehead).

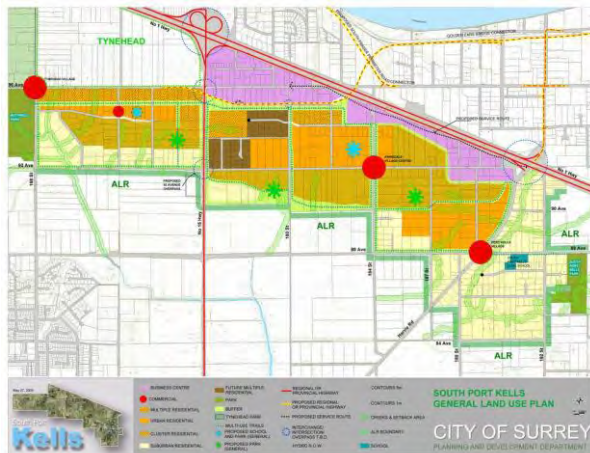
The Anniedale neighbourhood was further divided into two parts, Anniedale Area “A” and Anniedale Area “B” to advance planning for the area that was most significantly impacted by new highway construction. However, as the NCP process progressed, it became evident that the high cost of servicing as well as the uncertainty of access points from the Provincial and Regional transportation works would impact the ability to complete an NCP.

As a result, on April 19th, 2007 Council directed staff to suspend additional work on the Anniedale “A” NCP and instead requested staff to commence a planning process for an NCP for the combined Anniedale “A” and “B” area, once major transportation issues had been resolved (2007 Corporate Report R088).

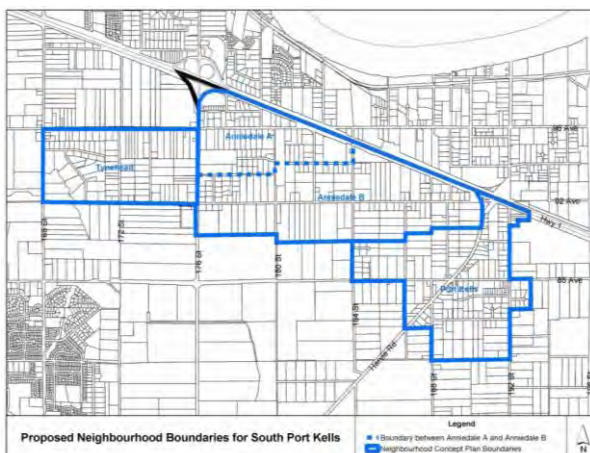
By late 2008 the Ministry of Transportation had advanced work on the design of the Highway 1 widening. City staff worked with the Ministry in reviewing various options, and draft plans and models related to the design of the intersection of Highway 15 and the Golden Ears Connector, and the design of a 192 Street partial interchange with Highway One.

Support for proceeding with a combined Anniedale and Tynehead was expressed through a petition signed by 125 individuals representing 116 property owners, and received by Council on February 9, 2009. This petition requested that Council authorize staff to initiate the groundwork for an Anniedale “A”, “B” and Tynehead NCP.

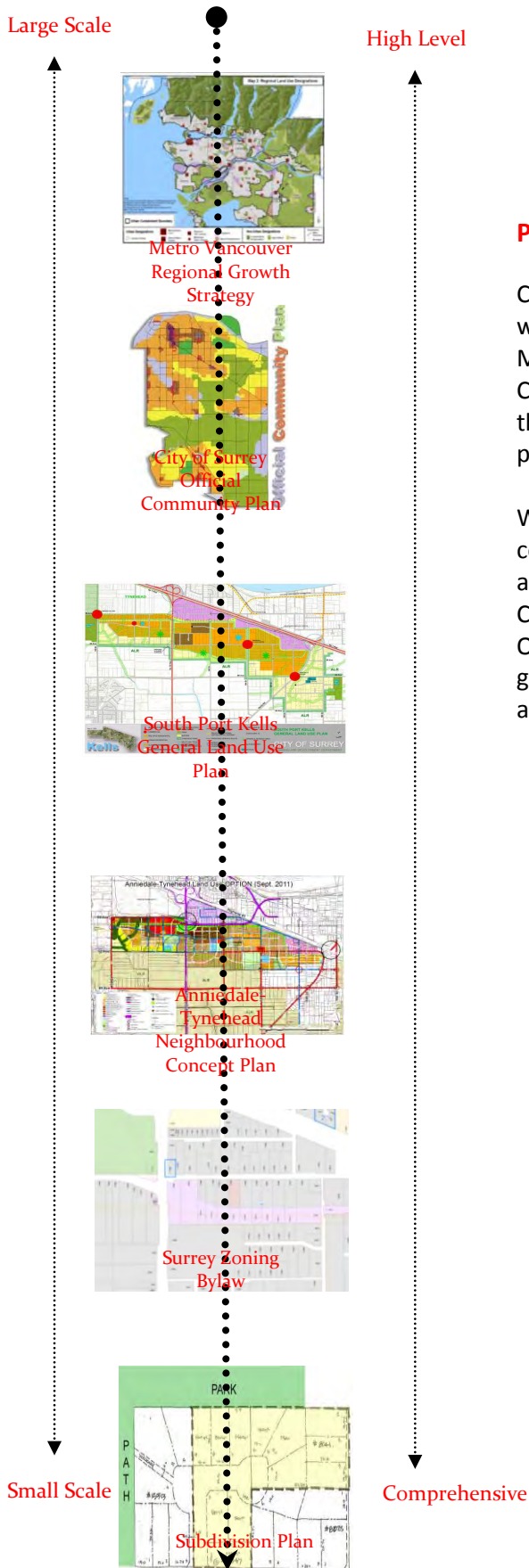
On March 30, 2009, Council received Corporate Report No. R034 and authorized staff to prepare a Terms of Reference for the Preparation of an NCP for Anniedale-Tynehead in South Port Kells.



South Port Kells General Land Use Plan



Original Proposed Boundaries for South Port Kells Neighbourhood Plans



Policy Framework Overview

Community Development in Surrey is conducted and administered within a series of plans, policies and by-laws. These include the Metro Vancouver Regional Growth Strategy, Surrey Official Community Plan, Secondary and Neighbourhood Concept Plans, the Zoning By-law, as well as several other city bylaws and provisional regulations.

Within the hierarchy of Plans, the Official Community Plan must conform to the Metro Vancouver Regional Growth Strategy while all the other Plans and By-Laws must conform to the Official Community Plan. Like the Regional Growth Strategy and the Official Community Plan, all other Plans within the hierarchy generally address the physical, social and economic aspects of the area for which they are prepared. (See **Figure 1.0**)

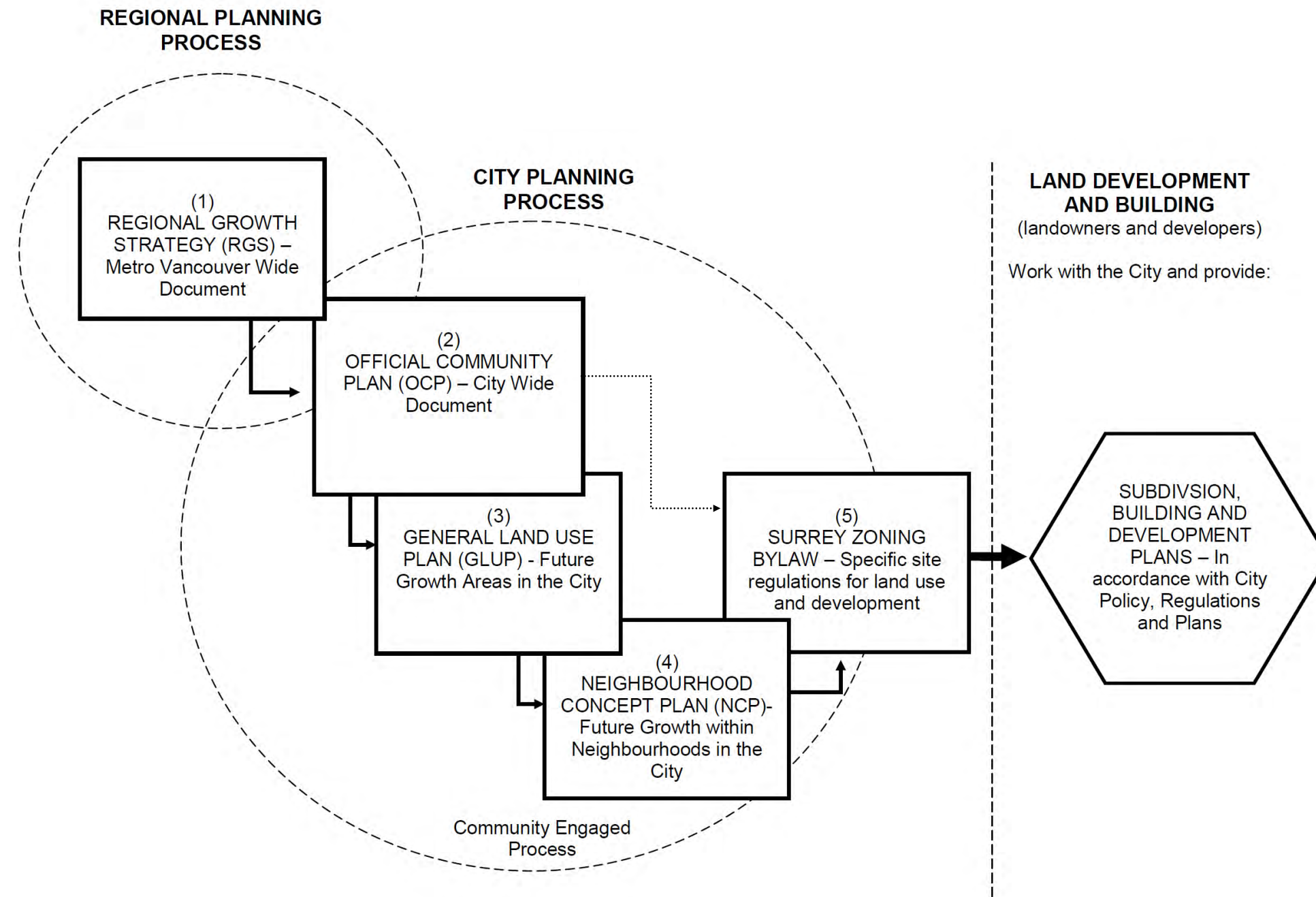


FIGURE 1.0 - LAND USE PLANNING FRAMEWORK

1. Regional Growth Strategy

This Planning Strategy establishes the general nature of future development in the Region of Metro Vancouver and forms the framework within which Regional Growth boundaries and Official Community Plans are to be prepared. In this respect, the City of Surrey Official Community Plan functions as a link between the broad concepts of the Regional Plan and local conditions and municipal objectives in the City of Surrey.

2. The Official Community Plan (Bylaw)

The Surrey Official Plan provides general policies and guidelines for development and the provision of community services in the entire City and forms the basis for Secondary and Neighbourhood Plan formulation.

3. General Land Use Plans (GLUPs)

General Land Use Plans provide an overall planning framework in designated future urban growth areas of the city that will act as a guide for the preparation of future Neighbourhood Concept Plans.

4. Neighbourhood Concept Plans (NCPs)

NCPs, once completed, plan for the servicing, development, and ultimate build-out of neighbourhoods within a GLUP area. They are prepared because the general policies directing city-wide growth and development are rarely detailed enough to address the specific issues in an individual community or neighbourhood. Once adopted by Council, these Plans inform the OCP and are integrated into the OCP by formal amendments as development (which is consistent with the NCPs) is approved.

5. Zoning By-law

The City of Surrey Zoning By-law, sets out detailed regulations for land use and development. Zoning is to be consistent with the objectives and policies of the OCP, and Neighbourhood Plans. The purpose of the Zoning By-law is to implement the policies of the various plans and provide standards for individual developments within the broad planning context.

1.2 OPPORTUNITIES AND CONSTRAINTS

The NCP area has multiple opportunities as well as constraints including transportation issues, high cost of servicing, agricultural land interface, and green space management.

Opportunities for consideration include:



- Plan a new full movement interchange with Highway 1 and 192 Street to improve access for employment land opportunities in the eastern portion of the Anniedale area and reduce the amount of traffic at both the existing Highway 1 and Highway 15 and 200 Street interchanges;
- Introduce new north-south arterial road connections to/from Anniedale to improve the accessibility between the Clayton, and Cloverdale neighbourhoods as well as the Campbell Heights employment lands;
- Create a continuous east-west and north-south internal local grid road network to adhere to Transportation Strategic Plan objectives of improving mobility choice which supports increased walking cycling and transit use and re attractive and reduce short-cutting and circuitous traffic patterns on Local Roads;
- Locate Industrial, Business park uses in close proximity to regional traffic routes such as Highway 15, Highway 1, and Golden Ears Way;
- Highlight views into the Agricultural Land Reserve and viewsapes into the plan area along the hillside;
- Incorporate the existing treed area along the hillside as a natural buffer between agricultural and residential uses;
- Use density bonusing as an incentive to increase preservation of green infrastructure in the plan area;
- Improve the wildlife connectivity through upgrading the Highway 1 wildlife underpass out of Anniedale and other wildlife corridors.
- Improve the health of the Serpentine River through a Riparian Enhancement area to allow installation of back channelling works; and
- Create a strong sense of place and identity for the future development by emphasizing the history and heritage of the area through the Urban Design of Commercial and Industrial area, Heritage Revitalisation agreements for significant sites, and commemoration and interpretation opportunities where preservation is not to be considered.

Constraints and issues for consideration include:

- Direct access controls on routes under the jurisdiction of other agencies would limit neighbourhood accessibility and potential land use designation to and along major regional corridors, including Golden Ears Way, Highway 1 and Highway 15;
- The at-grade signalized intersection of Golden Ears Way (GEW) & Highway 15 would not support the anticipated long term demands of both regional and neighbourhood traffic for typical industry standards of delay and level of service without major infrastructure improvements beyond those currently planned by regional and provincial agencies;
- The additional north south arterial connections would potential attract longer distance external and regional traffic, particularly 180 Street through Anniedale if Golden Ears Way & Highway 15 remains a congested at-grade intersection; and,
- The limited access to the Anniedale Triangle employment area at Golden Ears Way and 180 Street and the limited connectivity between the Anniedale and Tynehead neighbourhoods would require grade separated overpasses of Golden Ears Way and Highway 15, respectively, to support the development in the NCP
- Major servicing work in order for development to occur, including connection to water source at Cherry Hill, and ultimately Fleetwood Reservoir, construction of five sanitary pump stations, installation of eight stormwater detention ponds to intercept increased run-off from development, and construction of two overpasses along Highway 15, and one over Anniedale Road.



1.3 PLANNING AND PUBLIC CONSULTATION PROCESS

The public consultation process involved meeting with several stakeholder groups, City Advisory committee, governmental agencies as well as area city representatives and residents.

An integrated, multi-stakeholder approach to the planning process was used to arrive at the preferred development concept and the Stage 1 Land Use Concept, which formed the basis for the Stage 2 Land Use Concept Plan. The following consultative initiatives used:

The Anniedale-Tynehead Citizen Advisory Committee

A Citizen Advisory Committee (CAC) was established early in the NCP planning process through a community representative nomination and voting process. The goal of the CAC was to bring local knowledge and community concerns to the planning process and to involve residents in addressing the concerns. The CAC consisted of thirteen property owners (or representatives of property owners) and two association members within the plan area and residents of the surrounding neighbourhoods, The Committee met monthly through Stage 1 of the planning process to provide input into the development of the Land Use Concept, and at key points during Stage 2 as Engineering servicing and financing strategies were being finalized.

Public Meetings

Public meetings/open houses were held at key milestones during the NCP plan process to provide opportunities for interested parties to comment on the preferred development concept and utilities and transportation infrastructure.

Interagency Meetings

Meetings with external agencies were held throughout the planning process. Representatives from Translink, MoTI, MAL, BC Hydro, Fortis BC, and the Surrey School District took part in the meetings.

Meetings with Committees of Council

The plan was also presented to the various Committees of Council including the Environmental Advisory Committee, Agricultural Advisory Committee, the Development Advisory Committee, and the Heritage Advisory Commission.



Public Open House



Tynehead Hall – Location of CAC meetings during NCP Process



Shannon Hall, Cloverdale – Location of Public Meetings during NCP process



PART 2

NEIGHBOURHOOD CONCEPT PLAN OBJECTIVES

2.0	Purpose of the Plan	2.1	Vision and Framework
2.2	Planning Principles	2.3	Sustainability Elements
2.4	Sustainable Planning Objectives		

PART 2: NEIGHBOURHOOD CONCEPT PLAN OBJECTIVES

2.0 PURPOSE OF THE PLAN

The purpose of this plan is to outline the desired future land uses in the Anniedale-Tynehead Neighbourhood in the South Port Kells area of North East Surrey. The Plan includes strategies for land use and development, infrastructure servicing, transportation, heritage protection, ecosystem preservation, tree protection and other related development issues.

Secondary Land Use Plans play a critical role in influencing the spatial pattern, character and liveability of a developing community. The distribution and density of land uses can determine, where people might work, live, shop and play. It can influence building types and therefore who might live in a community. The proximity of uses can determine people's travels needs. As a result, land use can significantly affect the diversity, lifestyle, transportation needs and efficiency of a community. It is perhaps the most significant factor is becoming a complete community.

The Neighbourhood Concept Plan provides an effective means of guiding future development along with related policy, design guidelines and strategy required for development. For example, it will enable development applications to be reviewed against a Council-adopted land use plan and set of policies specific to this area. Together, these elements are intended to establish the foundation for the creation of a healthy and sustainable neighbourhood.

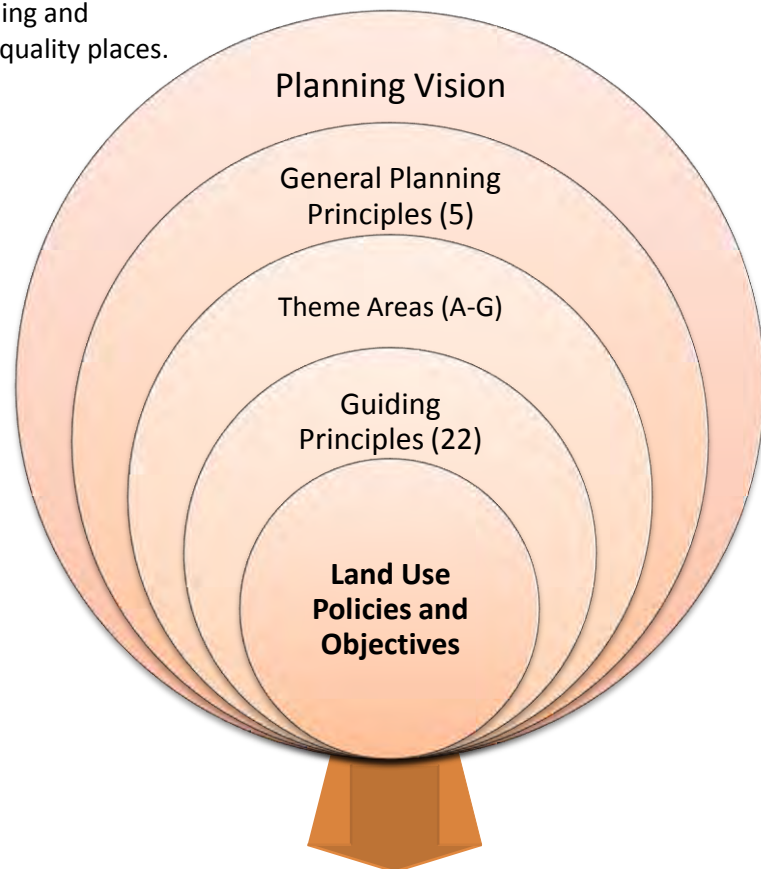
2.1 VISION AND FRAMEWORK

The Anniedale-Tynehead NCP land use concept is associated with the South Port Kells General Land Use Plan, which envisioned South Port Kells as a complete community with local commercial nodes, a business area, a mix of residential uses and densities, community facilities, schools, parks, pathways, open space and protected areas. The guiding principles for the development of the Anniedale-Tynehead area were established in association with the visioning process conducted during the initial General Land Use Plan process.

Vision

Anniedale-Tynehead is a unique, diverse, and thriving complete community that complements its surroundings, contributes to the healthy growth of Surrey, and builds on its strategic location in the region. The Anniedale-Tynehead community is a model of sustainable development that integrates the natural environment, interconnects neighbourhoods, provides a diversity of housing and employment choice, and ensures a legacy of quality places.

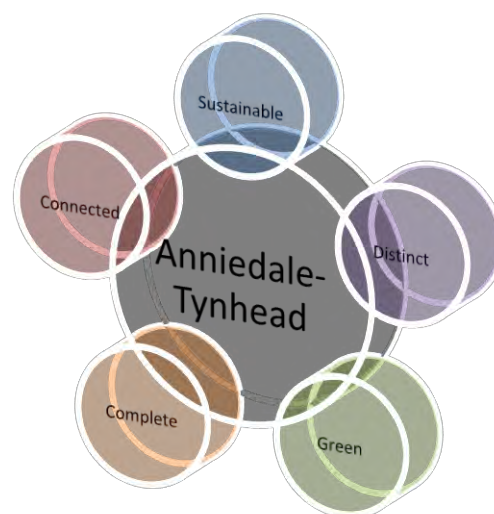
["The Anniedale-Tynehead neighbourhood is a unique, diverse, and thriving complete community that complements its surroundings, contributes to the healthy growth of Surrey, and builds on its strategic location in the region. Anniedale-Tynehead community is a model of sustainable development that integrates the natural environment, interconnects neighbourhoods, provides a diversity of housing and employment choice, and ensures a legacy of quality places."]



Anniedale-Tynehead Neighbourhood Concept Plan

2.2 PLANNING PRINCIPLES

Derived from the Anniedale-Tynehead Community Vision statement, the Anniedale-Tynehead Citizen's Advisory Committee (CAC) assisted in the creation of a set of Planning Principles and Planning theme areas and Guiding Principles to develop the land use plan for the NCP. These principles reflect overall sustainability principles set out in the South Port Kells General Land Use Plan and the City's Sustainability Charter objectives.



ANNIEDALE-TYNEHEAD NCP – GENERAL PLANNING PRINCIPLES	
<p>1 SUSTAINABLE</p>	<p>The Anniedale-Tynehead NCP will be based on the three pillars of sustainability: Social, Economic and Environmental Sustainability.</p>
<p>2 COMPLETE</p>	<p>The Plan will provide opportunities to Live, Work and Play. Anniedale-Tynehead will be planned as a "complete community" with a range of housing types, services, and employment and recreational opportunities.</p>
<p>3 DISTINCT</p>	<p>While Anniedale-Tynehead will have a distinct community identity, each neighbourhood should have its own recognizable character. It will be a beautiful place to live.</p>
<p>4 GREEN</p>	<p>Anniedale-Tynehead will have an abundance of open space, green corridors and protected wildlife areas to allow the residents to enjoy passive and active outdoor activities. Efforts will be made to preserve elements of the rural ambiance which currently exists in Anniedale-Tynehead.</p>
<p>5 CONNECTED</p>	<p>Anniedale-Tynehead will be a highly walkable community with an interconnected street network, pathways, cycle routes and greenway system.</p>

Guiding Principles

Based on five General Planning Principles developed for the Plan, seven Planning Theme areas (A-G) were identified that include 22 Guiding Principles for the development of the NCP. The *Guiding Principles* developed for the Anniedale-Tynehead NCP are described in the table below and guide several land use policy areas.

THEME AREA		ANNIEDALE-TYNEHEAD - GUIDING PRINCIPLES
A	Parks, Open Space, Recreational and Natural Areas	<ol style="list-style-type: none"> 1. Retain significant environmental features including creeks, important vegetation and Green Infrastructure (Ecosystem Hubs, Sites and Corridors): <ol style="list-style-type: none"> i. Consider Park locations which incorporate protection of significant and/or valuable ecosystems; ii. Minimize clear cutting vegetation and clearing lands during development and encourage the planting and replanting of trees; iii. Encourage cluster development which enables density transference and site specific design that responds to the area's natural features.
		<ol style="list-style-type: none"> 2. Create parks and recreation opportunities that are interconnected, both active and passive, which are accessible by residents of all ages and abilities on foot or by bicycle.
B	Roads, Transportation, Pedestrian and Bicycle Circulation	<ol style="list-style-type: none"> 1. Design roads that provide for efficient movement of goods and people while sustaining the character of each neighbourhood.
		<ol style="list-style-type: none"> 2. Design road networks and establish land use which encourages effective public transit service.
		<ol style="list-style-type: none"> 3. Create opportunities for pedestrians and bicycle movement linked with adjacent community amenities. Daily needs should be within walking distance.
		<ol style="list-style-type: none"> 4. Provide buffers along major highways and limit regional through-traffic in primarily residential areas.
C	Infrastructure and Servicing	<ol style="list-style-type: none"> 1. Ensure the cost-efficient and adequate provisions for City services including sewer, drainage, water, roads and utilities without placing a financial hardship upon the City's resources.
		<ol style="list-style-type: none"> 2. Ensure practices in the design of the drainage system, and the protection of water quality and resources.
		<ol style="list-style-type: none"> 3. Recognize the interrelationship of the Anniedale-Tynehead area with adjacent Town Centres in Surrey and Township of Langley, especially with respect to commercial, institutional and transportation needs.

D	Sense of Place and Identity	1. Locate commercial and mixed use development near neighbourhood amenities parks, schools, and facilities to maximize neighbourhood gathering and 'place making' opportunities.
		2. Protect and maintain the natural beauty and distinctive heritage of the area by: <ul style="list-style-type: none"> i. protecting view corridors and heritage building and sites; ii. enhancing view opportunities along the south facing slope adjacent to the ALR;
		3. Capitalize on "Gateways" into the community at 176 Street and 96 Avenue through the use of public art and other gateway features to identify the community.
E	Residential Lands: Housing and Housing Density	1. Provide a variety of housing types, densities and forms to accommodate a range of lifestyle and housing choices for people across the spectrum of family type, age and income levels.
		2. Protect the character and quality of life in existing and established residential areas during development: <ul style="list-style-type: none"> i. avoid piecemeal re-development; ii. provide guidelines and implementation policies such as phasing plans, parcel consolidation plans, and minimum redevelopment parcel sizes.
		3. Locate higher density residential development adjacent to commercial areas, especially near centres and mix-use areas;
		4. Designate densities that make serving feasible while also respecting environmentally sensitive and agricultural (ALR) edge transition areas.
F	Employment Lands: Commercial and Industrial	1. Provide local retail and shopping opportunities in village centre in each neighbourhood to provide locally accessible neighbourhood services.
		2. Create opportunities for residents to work close to home by accommodating business and industrial development in the Anniedale triangle and other business park lands.
		3. Create opportunities for smaller scaled, pedestrian oriented commercial spaces and destinations where people can meet; such as cafes, coffee shops and corner stores, during different parts of the day and into the evening.
G	Agricultural Edge Transition	1. Recognize, protect and enhance the Agricultural Land Reserve (ALR) Boundary and its interface by clustering development and density away from the ALR.
		2. Ensure the establishment and long term maintenance of effective buffers (fences, planted landscaping, open spaces, natural vegetation), between urban development areas and the ALR.

2.3 SUSTAINABILITY ELEMENTS



Sustainability principles and features have been incorporated into the Anniedale-Tynehead NCP. The NCP framework provides for walkability and inter-connection, places for community gathering and social interaction, employment lands, diversity of housing form and tenure, protection of biodiversity through riparian area protection, and low impact development practices.

Sustainability addresses more than the simple effort to minimize energy consumption, emphasize “green” construction practices, and create a liveable community. These elements are described in more detail in the Sustainable Planning Objectives section.

Land Use Objectives: The Sustainable planning objectives of the Anniedale-Tynehead NCP build upon the South Port Kells GLUP visioning framework and provide development policies with regard to the form and character of future land uses, densities, and servicing requirements.

Planning objectives to build an outstanding neighbourhood that adds value to the greater community includes the following ideals:

Housing Diversity: Diverse, flexible housing options are the cornerstone of healthy, inclusive and sustainable communities. The plan will provide for a range of housing types that support a diverse community, including all age groups, income levels, abilities, and household types and sizes.

Housing types will include multiple-unit residential in the form of apartments and townhouses as well as live-work residential housing. Fee-simple lots include ground oriented row houses, single family homes on small to medium sized lots, as well as larger sized lots. To allow for rental suites, small-lot single family homes will be able to accommodate either a secondary suite or coach house.

Residential designations will support both market and non-market housing (social housing) options. This includes housing for people who require supports in order to live and participate in the community; this includes housing for seniors, people with disabilities, and people who are homeless or at risk of homelessness.



Sustainability Charter



Access to Nature: Respect, conserve, and enhance the significant and valued natural/ecosystem (Green Infrastructure Network GIN) opportunity assets. Use innovative development approaches to preserve treed escarpment areas.

Walkability & Connection: Provide an interconnected street and path system to ensure that future community is walkable, healthy, accessible and livable. Provide connection to parks, schools, employment areas and community facilities.

Accessibility: Design neighbourhoods that are friendly and responsive to unique needs of children, youth, seniors and those with special needs.

Jobs Close to Home Provide opportunities for employment in the plan area. Include a range of employment types including opportunity for small scale live-work spaces.

Transit Supportive Development: Provide a minimum overall residential density of 37 dwelling units per hectare (15 units per acre) along future transit alignments. Situate commercial and community services along planned transit routes.

Greenhouse Gas Emissions Reduction: Create a complete compact community with higher development densities, a mix of land uses, interconnected road systems, and options for multimodal transportation modes to help reduce green house gas emissions and future energy needs.



Transportation Objectives

The City's Transportation Strategic Plan was developed to examine how the City can provide a transportation system that caters to the mobility needs of all, including the movement of goods and services associated with a successful economy as well as reducing the existing over-reliance on the automobile and increasing the number of walking, cycling and transit trips throughout the City.

The Strategic Plan aims to promote a balanced transport system that gives sustainable choices in the way we travel to, from and within Surrey and which integrates with other policy areas associated with the environment, health and safety, economic well-being and land use. Transportation has a part to play in all aspects of people's lives and a good system responds to many and varying needs and priorities. The Strategic Plan has taken a holistic approach to transportation and has six guiding principles:

1. Effective And Efficient Network Management
2. More Travel Choice
3. Safer, Healthier Communities
4. Successful Local Economies
5. Protection of our Built and Natural Environment
6. Transportation Integration

Emphasis is placed on providing a Transportation System that is efficient, equitable, safe, and sustainable and that promotes alternative and sustainable travel choices with a hierarchy for consideration as follows;

1. Walking
2. Transit
3. Bicycles
4. Commercial Traffic and Trucks
5. High Occupancy Vehicles
6. Single Occupancy Vehicles

The Walking Plan and soon to be completed Cycling Plan builds upon the Transportation Strategic Plan's recognition of the importance of these two modes of transportation.



Walking & Cycling

- ❖ Provide finer pedestrian/cycling network through a finer grid road network and provide shortcuts within and between developments to minimize walking & cycling distances;
- ❖ Use utility corridors for off-street walking and cycling routes;
- ❖ Provide for jobs, shopping, services and schools all within 30 minutes by walking or cycling and preferably closer;
- ❖ Maintain all arterial and collector roads to be “complete streets” by providing pedestrian facilities through buffered sidewalks and bike lanes;
- ❖ Ensure development “addresses the street” to improve pedestrian environment;
- ❖ Encourage use of rear lanes to reduce pedestrian, cyclist and vehicle conflicts at driveways on collector roads;;
- ❖ Provide frequent crossings of streets in convenient locations with shorter crossing distances using curb extensions at intersections, and mid-block median crossings with two-stage crossings on major roads,
- ❖ Provide end-of-trip facilities (bicycle parking, lockers, showers, and benches);
- ❖ Provide pedestrian/cyclist scale lighting.



Transit

- ❖ Provide a finer grid road network which supports increased walking access to transit service;
- ❖ Create a continuity of the highest population & employment densities along transit routes to create high density corridors;
- ❖ Locate major activity nodes, anchors and destinations where transit routes intersect;
- ❖ Locate transit stops within 400m walking distance of the major activity generators, destination, and highest density corridors;
- ❖ Co-ordinate transit investment with land use planning in support of high density, mixed use and compact development;



Commercial Traffic & Trucks

- ❖ Promote access to employment lands for all modes;
- ❖ Provide road network improvements that help reduce congestion in support of more efficient goods movement and economic vitality;
- ❖ Improve strategic road network that will both support economic development and reduce the impacts of truck traffic on communities;
- ❖ Maintain efficient goods movement on regional routes through NCP;



Road Network

- ❖ Promote community connectivity for all modes through the development of a higher density road network in a grid or modified grid pattern with a reduction in the number of cul-de-sacs to reduce traffic concentration, provide multiple route options, and promote increased use of network by pedestrians and cyclists;
- ❖ Target the grid road network for closely spaced streets with minimum 100 metre and maximum 200 metre long blocks;
- ❖ Recognize that a road right-of-way is a “public space” and must be a “complete street” for all forms of movement, not only for vehicles but also for pedestrians, cyclists and transit buses;
- ❖ Maximize connections with arterial & collector routes to provide direct routes to major origins & destinations, e.g. Surrey City Central, Fleetwood, Cloverdale, Clayton, Willowbrook, Langley City Centre, etc.
- ❖ Maximize efficiency of existing transportation network infrastructure before providing new or widening of existing infrastructure particularly through the Agricultural Land Reserve (ALR), with signal coordination and intersection improvements;



Land Use- and Transportation Integration Best Practices

- ❖ Provide self contained, “complete” communities with residential, commercial (retail & services) and employment opportunities (jobs/housing balance);
- ❖ Create compact, diverse and mixed-use communities; avoid large blocks of “mono zoning”;
- ❖ Incorporate best practices for storm water management into transportation projects with swales, rain gardens, streets trees, boulevards, medians;

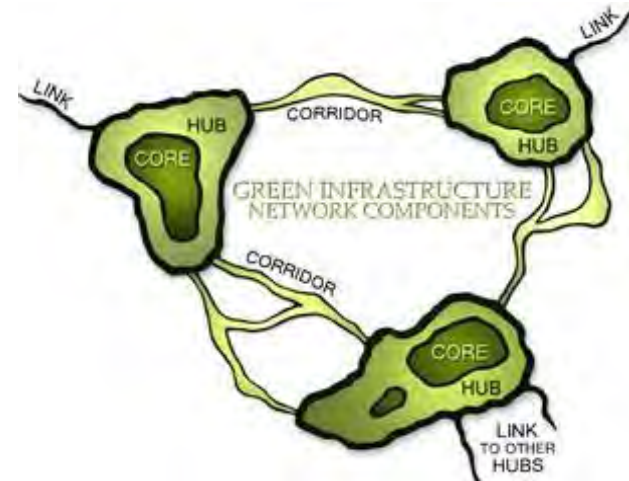


- ❖ Maximize greening in, and adjacent to, transportation corridors;
- ❖ Reduce impacts of roads on water quality, vegetation, trees and land consumption and protect significant trees where possible.

2.4 GREEN INFRASTRUCTURE NETWORK

The Anniedale-Tynehead NCP is the first Land Use Plan in the City of Surrey to incorporate Green Infrastructure Network (GIN) planning as part of the land use planning and Ecosystem Assessment process, based on the Surrey Ecosystem Management Study (EMS) objectives. Environmental mapping, selection of Park locations, buffer areas and Green Space Transfer areas within cluster designations where heavily influenced by the City of Surrey GIN Opportunities mapping.

“**Green infrastructure**” is a term identified in the Surrey Ecosystem Management Study (2009) as an interconnected network of natural or “green” elements that occur at a variety of scales – site/building, neighbourhood, community-wide, regional, and beyond. Similar to traditional “grey” infrastructure (roads, power, gas and other utilities, etc.) green infrastructure provides a critical underlying foundation to support the function and quality of neighbourhoods in the Anniedale-Tynehead NCP and also supports the function of the City and Regional ecological systems.



Green Infrastructure Management Objectives:

Ecosystem Hubs

- ❖ Identify the ‘minimum core’ of upland ecosystem hubs to be retained based on Vegetation ranking and detailed site specific biological studies prior to development approvals. In general hub cores that are round and as large as practical are preferred, so that interior habitats are preserved.
- ❖ Ensure larger hubs are considered for preservation as they provide a greater variety of biodiversity and habitats. (A 5 acre site will tend to support a greater diversity of species and habitats than a 1 acre site).

Ecosystem Sites

- ❖ The collective influences of many small habitats can be as great as a single larger park; to encourage biodiversity ensure small habitats are considered as critical areas for many urban species, or remnant populations of rare or endangered species.
- ❖ Where possible, integrate smaller natural sites, and clumps of trees forming part of the neighbourhood tree canopy and



‘naturescape’ practices into the general urban matrix and site plans. Small habitats can be critical to species’ survival.

Ecosystem Corridors

- ❖ Protect streams and habitats of any threatened or endangered species, and access to both refuge cover and food supply for existing or desired species.
- ❖ Prioritize the protection and/or restoration of effective aquatic and/or wildlife corridors that link hubs and sites together, so that plant and animal species are able to disperse and intermix for genetic diversity and population security.
- ❖ Routes between hubs, sites and corridors will likely follow existing watercourse and riparian areas, steep slopes, floodplains, wooded sites, and other areas that are constrained to development.
- ❖ Width of corridors will vary and should be determined based on detailed biological studies of the species that are or could use the habitat provided by the linked hubs and the corridor.

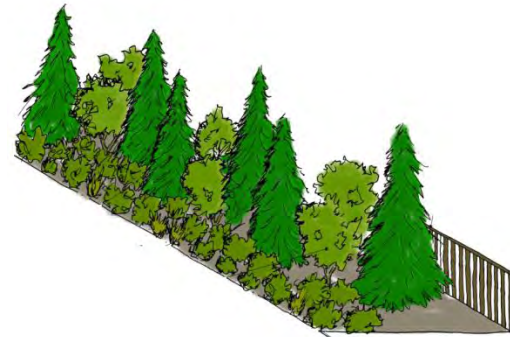


Rainwater Management

- ❖ Ensure effectively manage of rainwater, control sediment and erosion, promote tree cover and minimize harmful emissions recognizing that clean water and natural stream flow regimes, clean air, and mitigation of climate change are key ingredients to support a GIN, as per NCP Stormwater Management Requirements.

ALR Interface

- ❖ Some Agricultural lands outside the NCP -in wildlife terms - are currently functioning as both a hub and a large corridor – supporting wildlife populations and allowing relatively free movement - which allows wildlife to adapt to agriculture practices and co-exist with active farming.
- ❖ Restricted public access to private agricultural lands, and encourage large vegetated buffers along ALR Boundary. Buffers help protect core areas.
- ❖ The impacts of human activity and other ecosystem stressors, such as invasive species, tend to be greatest at the edges of ecosystems. A buffer area helps protect core areas from these impacts.



Public Access

- ❖ Public appreciation of the natural values and biodiversity in Ecologically Significant areas is important to successful management.
- ❖ Trails, utilities and other access to these areas however, should be planned in ways that limit disturbance to the species resident in the area. Trails may be restricted to adjacent lands or outer limits, so that the core is undisturbed.



2.5 CLUSTER HOUSING

Cluster designations are located throughout the plan area and are identified throughout the Land Use Plan. A “Cluster Designation” enables the transfer of development potential from treed, open space and/ or environmentally important areas called, “Green Space Transfer (GT)” areas to the developable portions of the site. The City seeks to conserve/enhance as well as agricultural buffer areas the City seeks to create or preserve, to areas specifically designated to be developed “Development Sites”.

Objectives

Cluster residential housing is designed to achieve the following objectives:

- ❖ Provide more efficient use of land in harmony with its natural features;
- ❖ Creativity in the design of developments through a carefully controlled process;
- ❖ To encourage a less sprawling form of development, a shorter network of streets and utilities, more economical development of land with less consumption of open space;
- ❖ To preserve permanently, natural topography and wooded areas within developed areas, and to preserve usable open space and recreation facilities close to home;
- ❖ To provide an efficient procedure to ensure appropriate high quality design and site planning to enhance the neighbourhood;
- ❖ To promote diverse housing at a variety of costs, and in particular housing types that meets the needs of the Town's diverse population;
- ❖ To support alternative residential development that has a positive impact on the community and incorporates unique public benefits; and
- ❖ To ensure that alternative residential development is compatible with surrounding land uses and that the impacts on public services will not exceed conventional residential development.



2.6 PLACEMAKING AND IDENTITY

The Plan for Anniedale-Tynehead recognizes and incorporates the history and the unique natural assets of the area. Unique assets of this community include natural views into, and out of, the plan area, as well as the history of sawmills and farming. These themes will be highlighted to build on the sense of identity for the Anniedale-Tynehead NCP area.

Views

Anniedale-Tynehead has strong natural beauty, which contributes to the area's sense of place and identity. There are magnificent views north to the mountains, south to the farmland, as well as views of the treed escarpment looking into the plan area.

Protecting and highlighting these view sheds and view corridors will reinforce the unique identity of Anniedale-Tynehead. The Cluster Housing Designations and Design Guidelines for Townhouse Escarpment Areas identify specific strategies for enhancing views and protecting the green hillside.

History

The Design Guidelines will draw on clues from the historical development to inform the creation of new development that has an identity rooted in the history of this place.

During the early 1800's, sawmills were located in close proximity to the river. Plank roads allowed the transport of logs from the river to sawmills, and then lumber was moved to the railroad.

Although a small industry, fishing was also unique to this area. At the turn of the century, fishtraps were set in the Serpentine River to catch spawning salmon.

Over time as land was cleared, agricultural practices grew in the area and farming became a large part of the economy. Agricultural practices included poultry, fruit and vegetable farms, and on the low lands, grain and hay were produced.



Mill east of Pike Road on Townline Avenue
Tynehead Memories



Drawing on the history of the area, the Sawmill and Lumber and Agricultural & Pastoral themes will provide direction for the future redevelopment of this area. These themes have been incorporated into Placemaking and Design Guidelines. **Figure 2.0** identifies these general theme areas. The Sawmill and Lumber theme will be most prevalent in the northern part of the NCP and the Agricultural and Pastoral theme in the southern part of the plan.

A “plank road” was also located in the vicinity of what is now the gas/hydro right-of-way. This theme can be enhanced along the greenway proposed on the right-of-way.

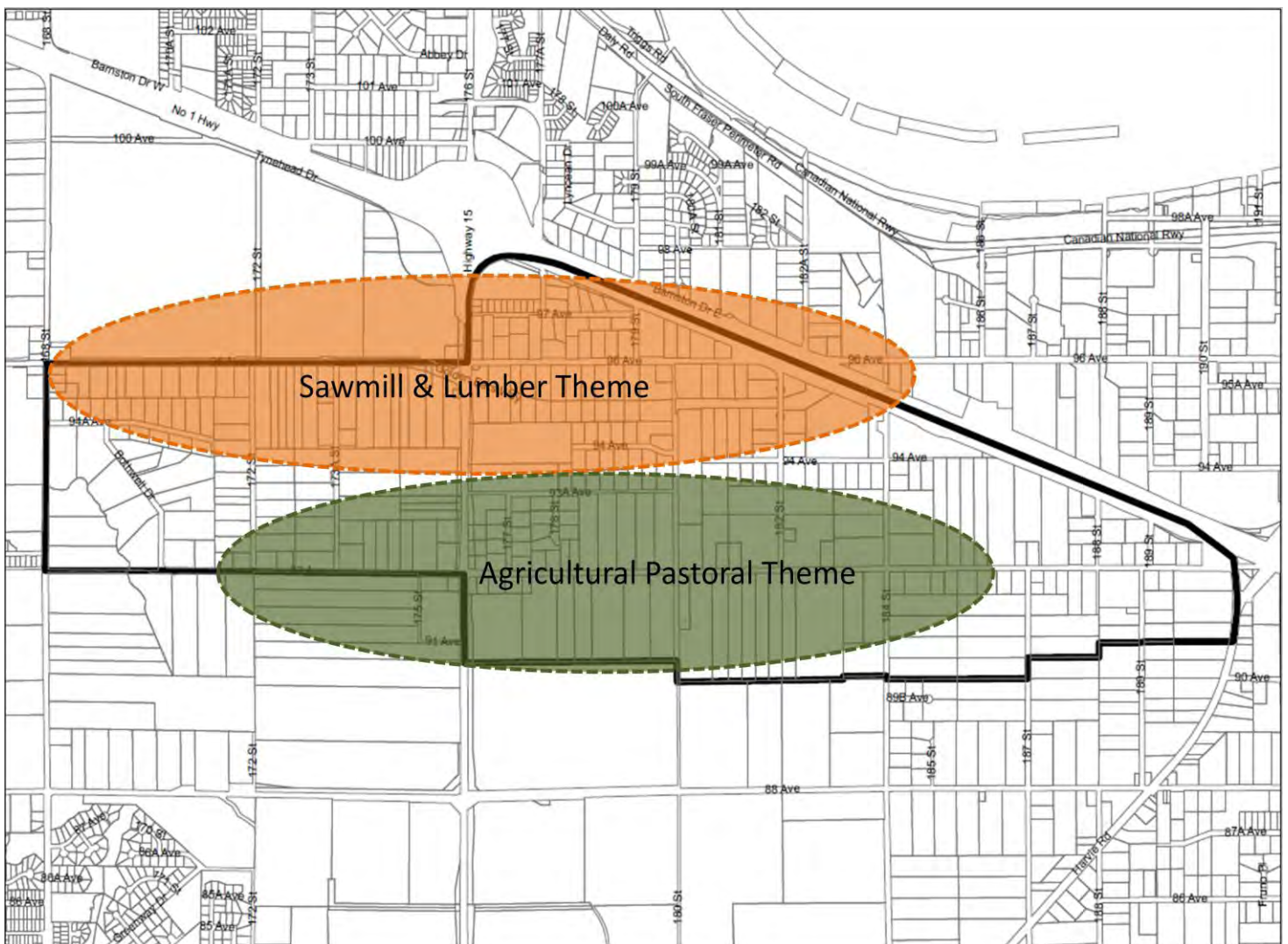


FIGURE 2.0 – THEME AREAS: SAWMILL AND LUMBER AND AGRICULTURAL PASTORAL



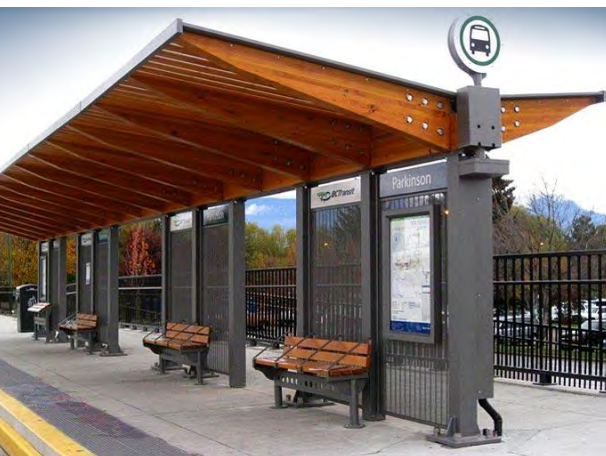
Sawmill and Lumber Theme

Sawmills were historically located on the future Tynehead Commercial and Regional commercial sites (see 4.5 Heritage Area Guidelines) To draw on this history, a sawmill and lumber theme will be used to guide the design of the redevelopment of those sites.

Lumber themes can include:

- ❖ the use of wood and heavy timber construction,
- ❖ sawmill paraphernalia such as saw blades and metal tools,
- ❖ repetition of logs,
- ❖ tree rings

Examples of the lumber themes used in redevelopment projects are shown in the following photos:



Agricultural Theme

A pastoral theme will be used to guide the development of the townhouses along the south side of the plan. This area features views onto the agricultural lands to the south, and even to this day has a rural farming influence through planted hedgerows and split rail fences.

Public views to the south will also be highlighted in new developments. View corridor opportunities will be examined on a case-by-case basis.






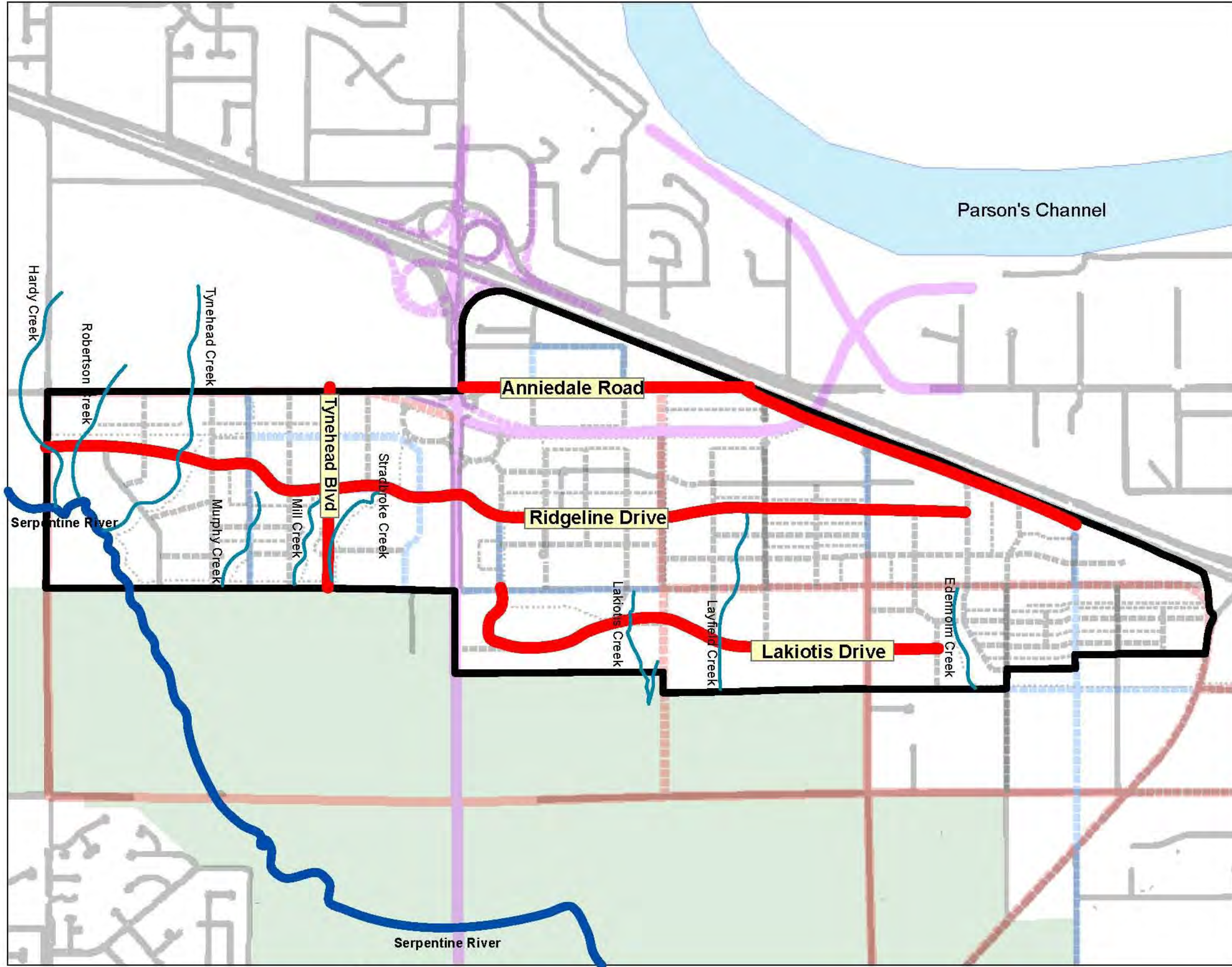
Incorporation of the pastoral and farm house theme into the built form will include elements such as front porches, gable roofs, and split rail fences.

Place Naming

To further reinforce the Anniedale-Tynehead's history and sense of place, historical names from early settlers have been used to name some key streets, trails, ponds and creeks in the plan area (as shown in **Figure 2.1**).

LEGEND

-  Annidale-Tynehead NCP Area
-  Proposed New Road Name
-  Proposed Creek Name

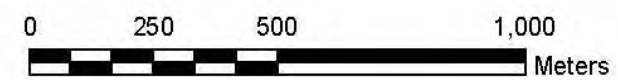


Anniedale-Tynehead NCP

Proposed Street
and Creek Names

Figure 2.1

The accuracy and completeness of information shown on this drawing is not guaranteed. It will be the responsibility of the user of the information shown on this drawing to locate and establish the precise location of all existing information, whether shown or not.



The background of the entire page is a detailed architectural site plan. It shows a complex layout of buildings, streets, and green spaces. The buildings are represented by various shapes and sizes, some with hatched patterns indicating specific materials or structures. Streets are shown as lines with names like 'NOTER LANE' and 'Eastern Road'. There are numerous trees scattered throughout the plan, and parking areas are marked with diagonal hatching. The overall style is a technical drawing with a focus on spatial organization and design details.

PART 3 LAND USE & DESIGN

- 3.0** Overview of Land Uses
- 3.2** Cluster Residential Areas
- 3.4** Commercial Areas
- 3.6** Institutional Areas
- 3.8** Public Realm Furnishings

- 3.1** Residential Areas
- 3.3** Mixed Use Areas (Live-work)
- 3.5** Industrial and Business Park Areas
- 3.7** Parks, Recreation and Trails

PART 3: LAND USE AND DESIGN

3.0 OVERVIEW OF LAND USES

The proposed Stage 2 Land Use Concept Plan (see **Figure 3.0**) features a mix of land uses including a range of residential housing densities, commercial and plaza areas, industrial and business park areas, a community centre, neighbourhood parks, trail and pathway networks, riparian areas and three elementary schools and are summarized in **Table 3.0**.

A wide range of residential densities are proposed in the plan, ranging from apartments and townhouses to single family dwellings. The highest densities are located in the northern portion of the plan close to future transit routes along 96 Avenue and 94A-Avenue (Ridgeline Drive). The residential densities decrease moving southward towards the Agricultural Land Reserve (ALR) and westward toward the Serpentine River. Cluster Housing designations have been proposed in key areas of the plan to allow for the retention of valuable tree stands and wildlife connectivity.

Three neighbourhood commercial areas are proposed in the NCP. These commercial areas are located at 96th Avenue and 168th Street, 180 Street and 93A- Avenue and at 184 Street and 92 Avenue. The commercial area at 96 Avenue and 168 Street will be required to incorporate heritage aspects into the development. All three commercial areas will include a public plaza, public seating, public art features, and a central open space to accommodate public gatherings or farmer's markets.

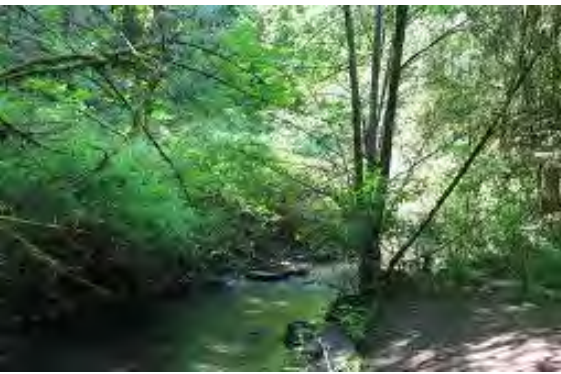
A large scale, regional shopping centre is proposed on the south side of 96 Avenue, to the west of Highway 15. This designation was proposed at this location because the site has good visibility from Highway 15 and Golden Ears Way. This commercial centre will be required to incorporate public gathering and amenity spaces at key locations in the development as well as a "main street" commercial area within the site. Specifics of the design requirements are outlined in the Design Guidelines contained in **Part 3** of this document.

A community centre is proposed along 93 A- Avenue (Ridgeline Drive) to the west of 180 Street. Situated along a street with future high density residential uses, future bus route, and planned commercial and live/work areas, this community centre will help form the heart of the community.





Seven neighbourhood parks and one Community Park are proposed to provide residents with recreational areas that offer both active and natural recreational space. The community park, located at 184 Street and 92 Avenue, will provide playing fields, a water park, playground, dog off-leash area and youth park all connected by trails and greenways. Detailed planning of this park and neighbourhood parks will be subject to public consultation with the future residents of the NCP.



The NCP trail network, totalling over 9 kilometres in length, connects to three existing trail systems outside the plan area: the Tynehead Perimeter Trail and Tynehead Overpass, the Green Timbers Greenway, and the Golden Ears Greenway. The NCP trail system will accommodate a range of users, provide seating areas, signage and trail markers and at key points, and offer significant views out to the ALR.

A major riparian area is located along the Serpentine River on the western side of the plan. Other riparian areas are located in three park areas, and cluster residential areas.



Three elementary school sites are proposed in the plan area. These sites have been co-located with neighbourhood parks and the community centre in order to allow sharing of amenities.

Entrance features are planned in three areas of the plan. One will be located at 172 Street and 96 Avenue to mark the entrance into Tynehead Park, another at 176 Street and 96 Avenue as an entrance into the northern end of neighbourhood, the third feature at 184 Street and 90 Avenue as the southern entrance into the community park.

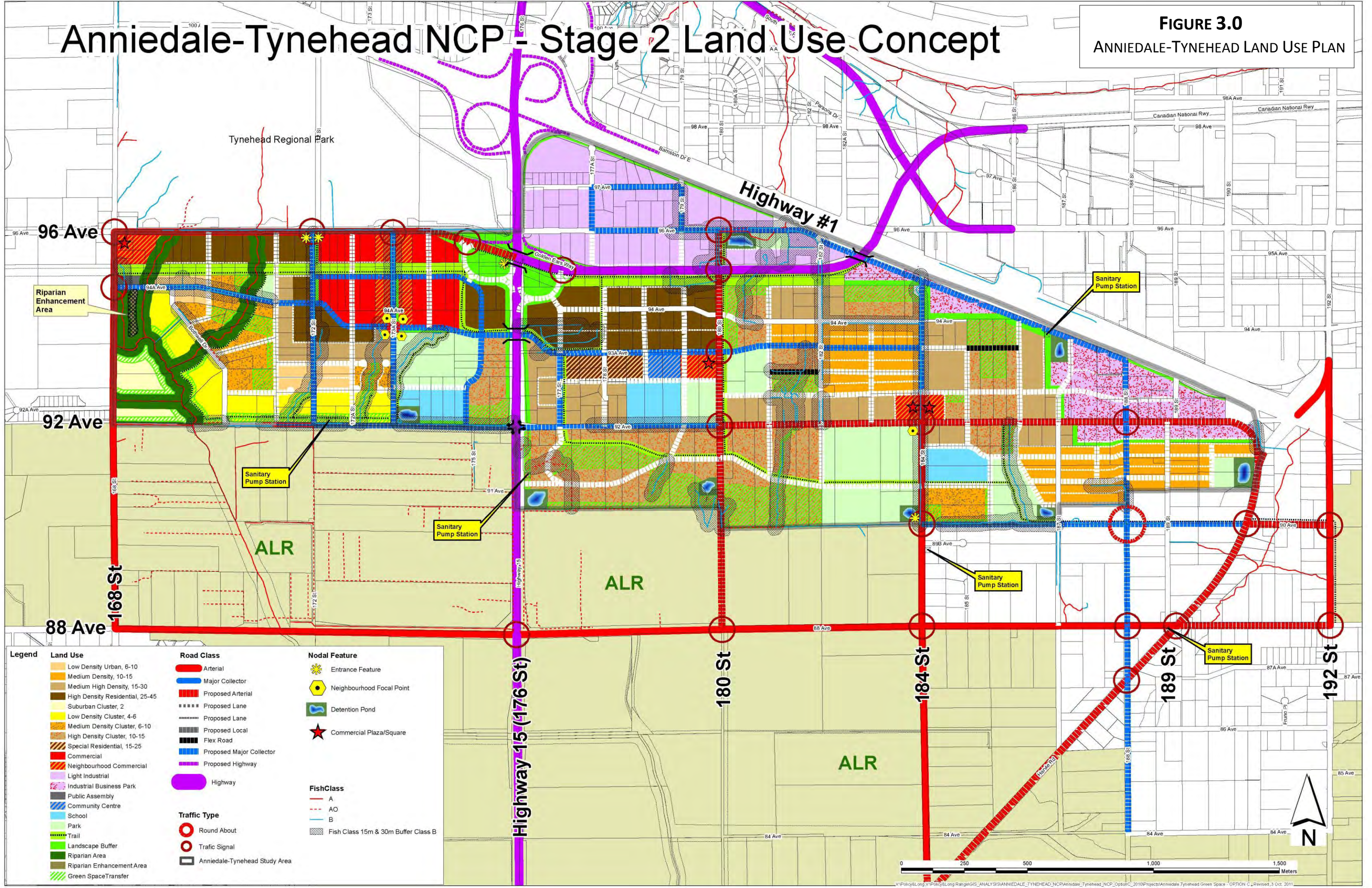
The overall street structure of the plan is based on a grid pattern to promote connectivity for pedestrians, cyclists, and automobiles. Two overpasses are proposed in order to provide east-west connectivity in the plan area, and to maintain efficient regional traffic movement along Golden Ears Way and Highway 15.



A series of drainage ponds are located along the southern and northern boundaries of the plan; these ponds will also serve as an amenity for the community.

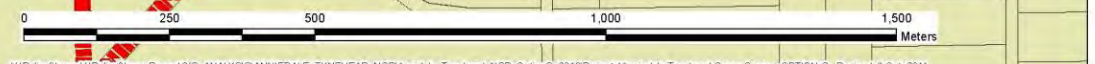
Anniedale-Tynehead NCP - Stage 2 Land Use Concept

FIGURE 3.0
ANNIEDALE-TYNEHEAD LAND USE PLAN



Legend

Land Use	Road Class	Nodal Feature
Low Density Urban, 6-10	Arterial	Entrance Feature
Medium Density, 10-15	Major Collector	Neighbourhood Focal Point
Medium High Density, 15-30	Proposed Arterial	Detention Pond
High Density Residential, 25-45	Proposed Lane	Commercial Plaza/Square
Suburban Cluster, 2	Proposed Lane	
Low Density Cluster, 4-6	Proposed Local	
Medium Density Cluster, 6-10	Flex Road	
High Density Cluster, 10-15	Proposed Major Collector	
Special Residential, 15-25	Proposed Highway	
Commercial	Highway	
Neighbourhood Commercial		
Light Industrial		
Industrial Business Park		
Public Assembly		
Community Centre		
School		
Park		
Trail		
Landscape Buffer		
Riparian Area		
Riparian Enhancement Area		
Green Space Transfer		
	Traffic Type	FishClass
	Round About	A
	Traffic Signal	AO
	Anniedale-Tynehead Study Area	B
		Fish Class 15m & 30m Buffer Class B



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


















Land Use Designation		Density or Intensity Range	Maximum Building Height	Description
Residential Designations				
	Low Density Residential	6-10 UPA 0.4 – 0.55 FSR	2 Stories and Basement where feasible	Includes primarily single-family development, characterized by individual homes constructed in subdivisions with lot sizes ranging from (306m ² to 418 m ² , or custom units built on slightly larger lots. Minimum Lot Depth of 12 meters. One Secondary suite per unit may be permitted.
	Medium Density Residential	10-15 UPA 0.5 – 0.6 FSR	2 Stories and Basement where feasible	Includes single-family oriented development characterized by individual single-family homes, or zero lot line-single family houses (with or without secondary suites), duplexes, and triplexes. Quadplex development or <i>Manor Homes</i> may be appropriate on Corner lots. Minimum lot width for single family dwellings of 9 meters. Coach houses may be considered on single family lots, with a minimum lot depth of 35 meters. Parking access provided by rear lanes.
	Medium-High Density Residential	15-30 UPA 0.6 – 0.9 FSR	2-3 Story (11 m) Rooftop Gardens are permitted	Includes ground oriented Townhouses and Row house units in areas with access to major circulation routes, business districts and public amenities. Typical developments may consist of two-or-three story buildings that house multiple dwelling units and may provide some form of indoor and outdoor amenity spaces. Parking access provide by rear public or private lanes.
	High Density Residential	25-45 UPA 0.9 - 1.3 FSR	4-6 Stories (22.5 m) (With Underground Parking)	Apartments with Townhouse base and underground parking. Includes high-intensity stacked Townhouses and Low-Rise Walk-up apartment units surround central retail or transit areas with convenient access to neighbourhood amenities. Walk ability and pedestrian access are key considerations.
Cluster Residential Designations (Green and Open Space Preservation)				
	Suburban Cluster	Maximum 2 UPGA 15 - 30% Open Space	2 Stories Basement where feasible	Larger Lot single-family oriented development, surrounding western edge of Serpentine River floodplain. Flexibility of lot size is provided, (no less than 557 m ² for detached housing and no smaller than 278 m ² for attached housing), to allow for clustering of lots near existing roads, and away from Riparian and Flood Plain to reduce fill and preserve and enhance riparian area features.
	Low Density Cluster	4-6 UPGA 30 -40% Open Space	2 Stories and Basement where feasible	Includes primarily single-family oriented development, on bare land strata lots adjacent to 92 Avenue and the ALR Edge, or along the eastern edge of the Serpentine River. Flexibility of lot size is provided to allow for smaller urban lots, or attached housing clustered together away from Riparian areas or the ALR edge.
	Medium Density Cluster	6-10 UPGA 35 -45 % Open Space	2 Stories and Basement where feasible	Includes a mix of single-family, zero lot line single family lots, duplex and triplex buildings clustered away from riparian, ALR edge, or environmental features. Fee Simple and Strata Row house development may be considered along City Roadways and Transit Corridors.
	High Density Cluster	10-15 UPGA 40 -50% Open Space	3 Stories	Includes ground oriented Townhouses and Row house units clustered away from the ALR Edge or environmentally significant features, steep slopes, or unstable soils. Flexibility of lots sizes is provided to allow for a mix of smaller urban lots, attached housing, and townhouse/row house development along city road right-of-ways.
Mixed Use Designation				
	Special Residential-Mixed Use	15-25 UPA 0.6–0.9 FSR	3 Stories	Primarily residential area made ground oriented triplex, or row houses with the option of small scale, low impact retail or service commercial business along public streets. Live-work unit areas are to incorporate no more than 30% of the unit, and are to be located at the ground floor with direct access to a public street with a minimum 32 m ² of commercial space. Parking for residential units will be accessible from the rear with on-street parking provided for business and commercial components along Ridgeline Drive, or 177 street.
Commercial Designation				
	Large Format Commercial	0.5 to 1.0 FSR	1 to 2 Stories	Provides for a larger building in a unified grouping, in one or more buildings, of retail shops, grocery stores, and offices which are planned and developed as an operating unit intended for the conduct of business which serves the immediately surrounding residential neighbourhoods and the larger trade region.
	Neighbourhood Commercial	0.6 to 1 FSR	1 to 2 Stories	A Neighbourhood oriented commercial area which promotes a mix of commercial, retail, restaurant, and office uses which serve the day-to-day needs of surrounding residents. It caters to shoppers in the immediate neighbourhood for convenience items, such personal care, groceries, dental and medical offices, etc.
Industrial Designations				
	Light Industrial	0.5 to 0.75 FSR	2 Stories (12 m)	Employment lands which allows for manufacturing, processing, warehousing and distribution of goods in an industrial park development.
	Industrial Business Park	0.5 to 1.0 FSR	4 Stories (15 m)	Employment lands which allows for manufacturing, processing and distribution of goods in conjunction with Low-rise office and professional office park development. High tech, and Industrial Supportive services and commercial uses are also permitted as necessary to service industrial office park.
Institutional Designations				
	School	Max 0.3 FSR	1 to 3 Stories (12 m)	Provides for public, quasi-public and institutional uses, including elementary or high schools.
	Public Assembly	Max 0.3 FSR	1 to 3 Stories (12 m)	Provides for places of religious worship and associated assembly halls. May also include community and social centres, clubs, or fraternal lodges.
	Community Centre	Max 0.5 FSR	2 to 4 Stories (15 m)	Public location where members of a community tend to gather for group recreational activities, social support, and public information programming. Majority of parking is provided underground or at the rear of the building.
Parks & Green Infrastructure Network				
	Public Park	N/A	N/A	Public lands used for passive and/or active recreation. Includes all park lands to be acquired and maintained by the City, acquired through Parkland DCC contributions and parkland dedication.
	Public Trail	N/A	N/A	Public urban multi-use pathways or trails, provided for active and/or passive recreations and pedestrian or bike connections.
	Landscape Buffer	N/A	N/A	A combination of built, natural or planted perennial system in a position in the landscape to mitigate any of a number of undesirable environmental impacts such as noise, trespass, dust, runoff etc), separating adjacent land uses or roadways with a combination of fencing, berms, trees and vegetation.
	Riparian Area Reserve	N/A	N/A	Public city lands acquired through riparian area dedication as determined by the Federal Department of Fisheries and Oceans through development. Limited outdoor recreation opportunities may be provided along outer edge of development in the form of passive hiking trails and wildlife viewing stations.
	Green Space Transfer Areas	Transfer Density Varies	N/A	Ecologically significant areas, Steep hillsides >15% slope, creeks, ecosystem management hubs, ALR Buffers, creek buffers, sensitive soils, and significant ridgelines that should not be developed; but provide a density bonus/transfer as determined by the underlying cluster designation density. Lands in this area must be provided as permanent open 'green space', as public/semi-public passive parks, or private strata maintained parks, or alternative green infrastructure.
	Ecological Compensation Area (ECA)	N/A	N/A	Area is adjacent to a Serpentine and other streams that links aquatic to terrestrial ecosystems and includes both existing and potential riparian vegetation and existing and potential adjacent upland vegetation that exerts an influence on the streams. Candidate Lands intended for Riparian area ecological restoration, and enhancement from other compensation. City to acquire lands.

TABLE 3.0 - ANNIDALE-TYNEHEAD LAND USE CLASSIFICATION SUMMARY

Land Use Plan Statistics

Table 3.1 provides a breakdown of the land uses with regard to land area, and population and employment projections at full build-out.

Table 3.1 - Breakdown of Land Uses

Anniedale-Tynehead NCP - Breakdown of Land Use						
Land Use	Acres	Projected Units (Low)	Projected Unit (High)	Projected Population (Low)	Projected Population (High)	Projected Employment
Road Way	250.1	0	0	0	0	0
Landscape Buffer	42.8	0	0	0	0	0
Multi-Use Trail	44.0	0	0	0	0	0
Riparian Reserve	31.7	0	0	0	0	0
Park	78.4	0	0	0	0	0
School	14.7	0	0	0	0	84
Community Centre	2.9	0	0	0	0	38
Public Assembly	0.7	0	0	0	0	3
Commercial	24.1	0	0	0	0	997
Neighbourhood Commercial	16.6	0	0	0	0	942
Light Industrial	73.6	0	0	0	0	2,465
Industrial Business Park	41.0	0	0	0	0	2,163
Suburban Cluster Residential	7.4	15	15	48	48	0
Low Density Residential	5.4	33	54	101	168	0
Low Density Cluster Residential	23.9	96	144	296	445	0
Medium Density Cluster Residential	35.0	210	350	650	1,083	0
High Density Cluster Residential	136.8	1,368	2,052	4,232	6,348	0
Medium Density	48.0	480	720	1,485	2,227	0
Medium-High Density	74.8	1,123	1,871	3,473	5,789	0
High Density Residential	53.4	1,419	2,403	3,038	5,144	0
Special Residential	6.3	94	157	201	336	0
Total	1,011.6	4,836	7,765	13,525	21,588	6,691

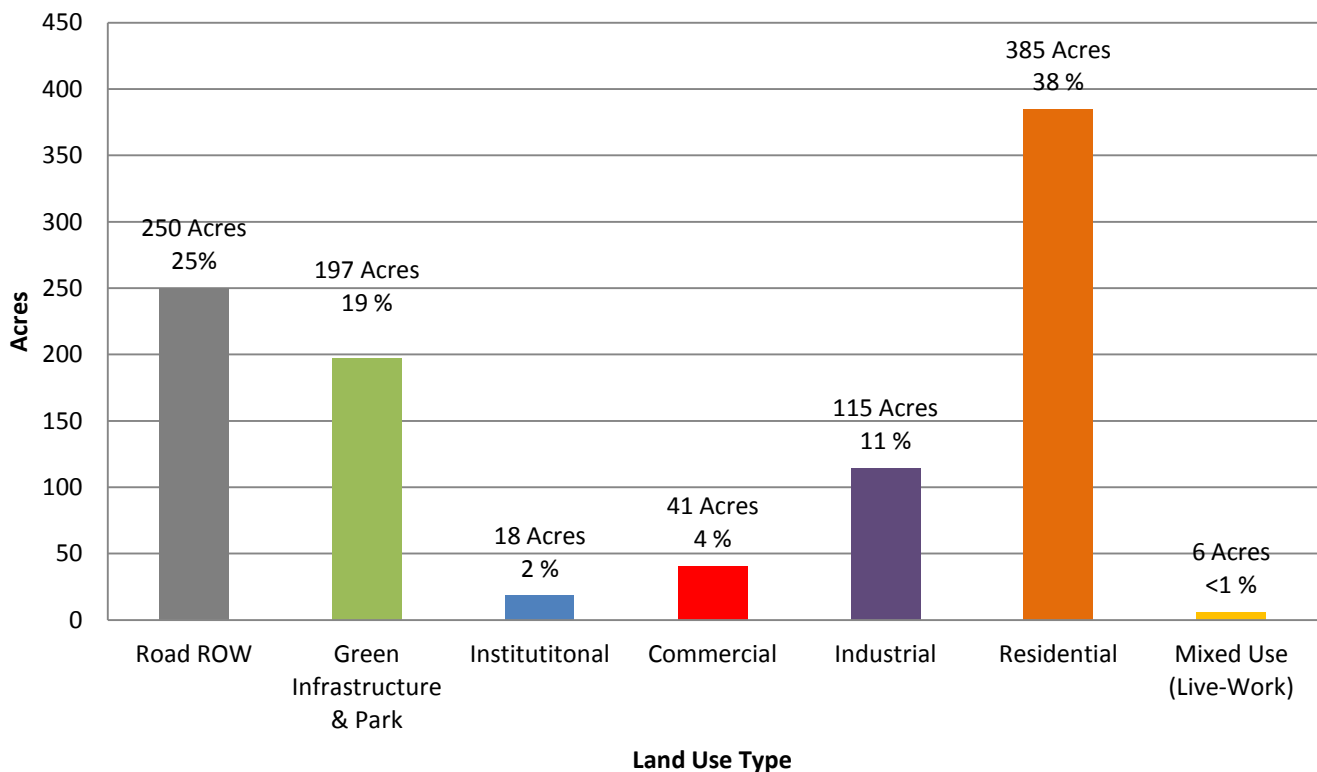
Mix of Uses

The NCP Plan proposes a wide range of uses. The figure below illustrates the amount of land dedicated to each of the uses. The largest component of the land area is comprised of residential uses (38%). To ensure the plan is walkable, and transit friendly, twenty-five percent (25%) of the land area is dedicated to road-right-of-way. This percentage includes land area for cars, bikes, sidewalks and treed boulevards.

Nineteen percent (19%) of the land base in the plan area is designated as the following uses: Parks, Trails, Riparian Areas, and Public Open Space.

In order to create a complete community, where residents can work close to home, various employment uses are provided in the plan area, and account for 18% of the land area. Thirteen percent (13%) of the land area accounts for Industrial, Business Park and Institutional uses, four percent (4%) for commercial uses, and 1% of the land area for mixed-use live-work areas.

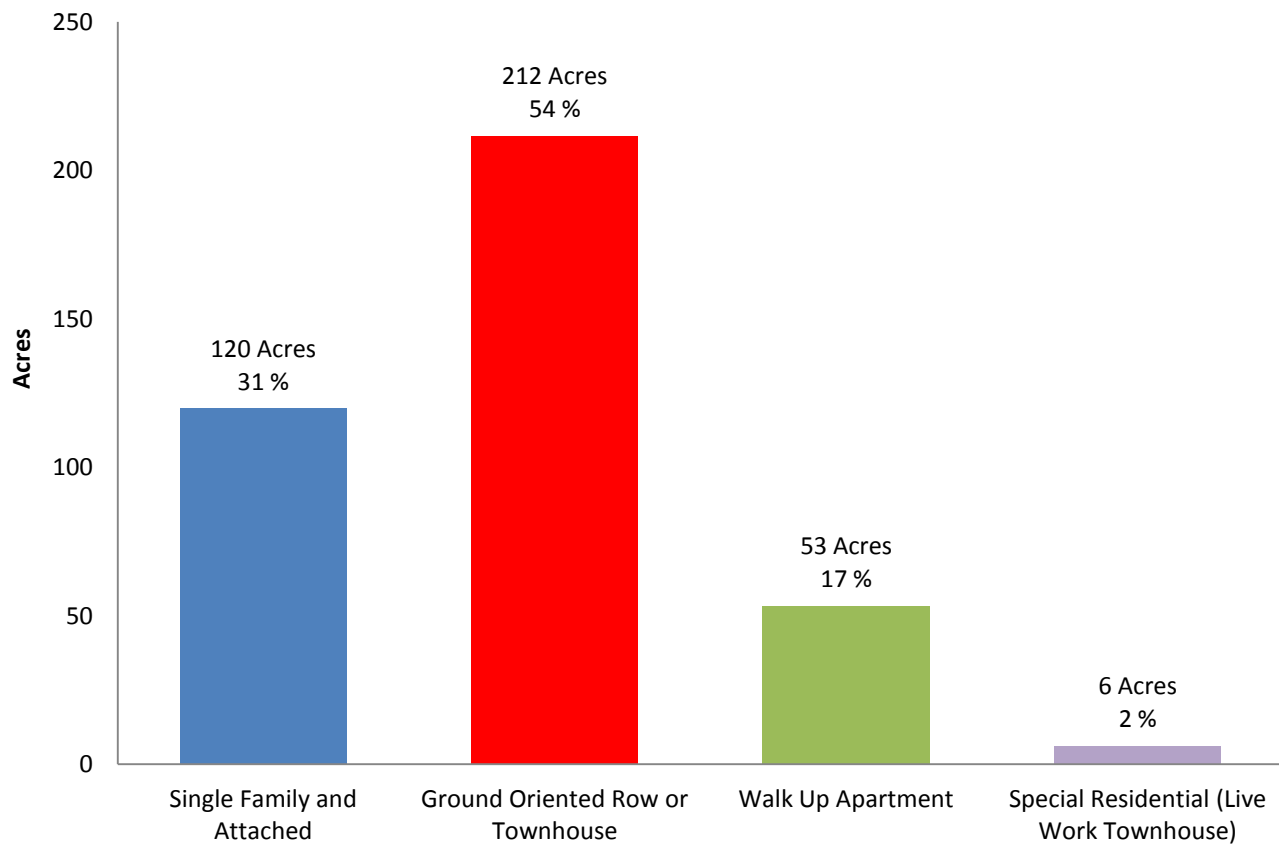
Anniedale-Tynehead Mix of Land Uses



Residential Land Use Composition

The plan area offers a variety of residential densities. Over 70% of the residential designations are in the form of multi-family housing, 54% as ground-oriented row houses or townhouses, and 17% as apartment densities. These higher residential densities, are still family oriented, and also help to support transit.

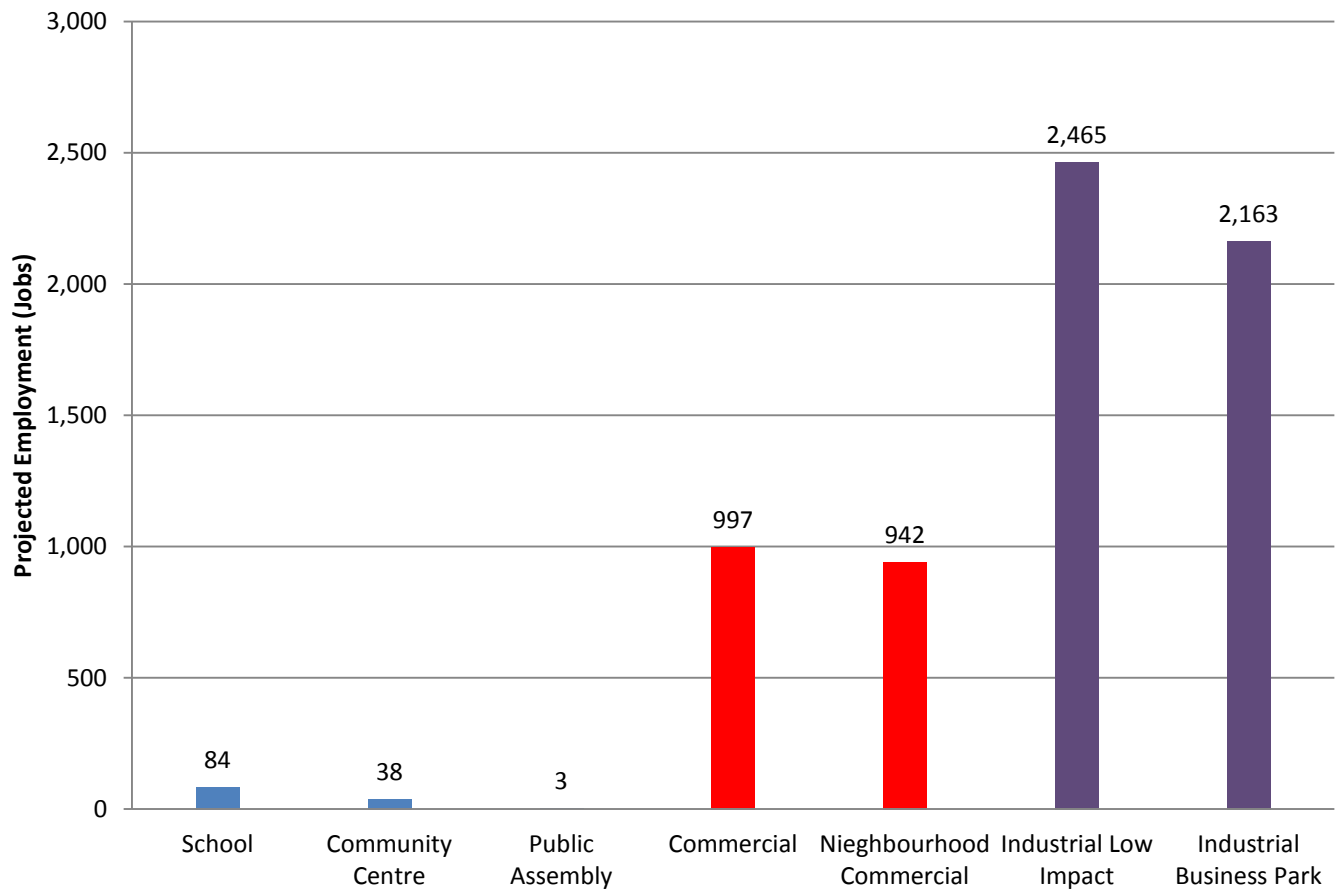
Projected Residential Area by Housing Type



Employment Projections

This plan area will provide approximately 5,750 jobs at full build-out. The figure below shows the breakdown of the projected employment by land use types.

Employment Land Projections



3.1 RESIDENTIAL AREAS

Residential areas are expected to achieve a strong and cohesive overall urban residential character and reinforce the relationship of the residential units to the public street. It is expected that the various residential densities and housing types proposed in the plan can be accommodated in the neighbourhood based on a typical residential block as a basic module.

The intent of the residential area policies and development design guidelines are to encourage the development of a variety of housing types, densities, and forms that will provide a variety of housing options while still ensuring a strong and unified residential character for Anniedale-Tynehead while preserving environmental significant features.

These guidelines support the sustainable planning principles of the Surrey Sustainability Charter and those previously outlined in this plan, with a special emphasis on the following Guiding Principles:

Principle 1

- Provide a variety of housing types, densities and forms to accommodate a range of lifestyle and housing choices for people across the spectrum of family type, age and income levels.

Principle 2

- Protect the character and quality of life of existing established residential areas

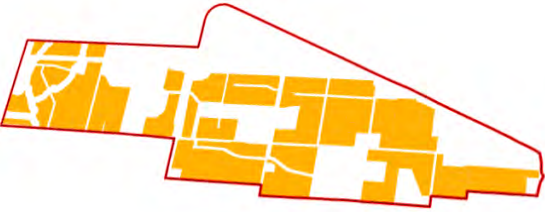
Principle 3

- Locate higher density residential development adjacent to commercial areas, especially near centres and mixed uses areas.

Principle 4

- Designate densities that make servicing feasible while also respecting environmentally sensitive and ALR transition areas.

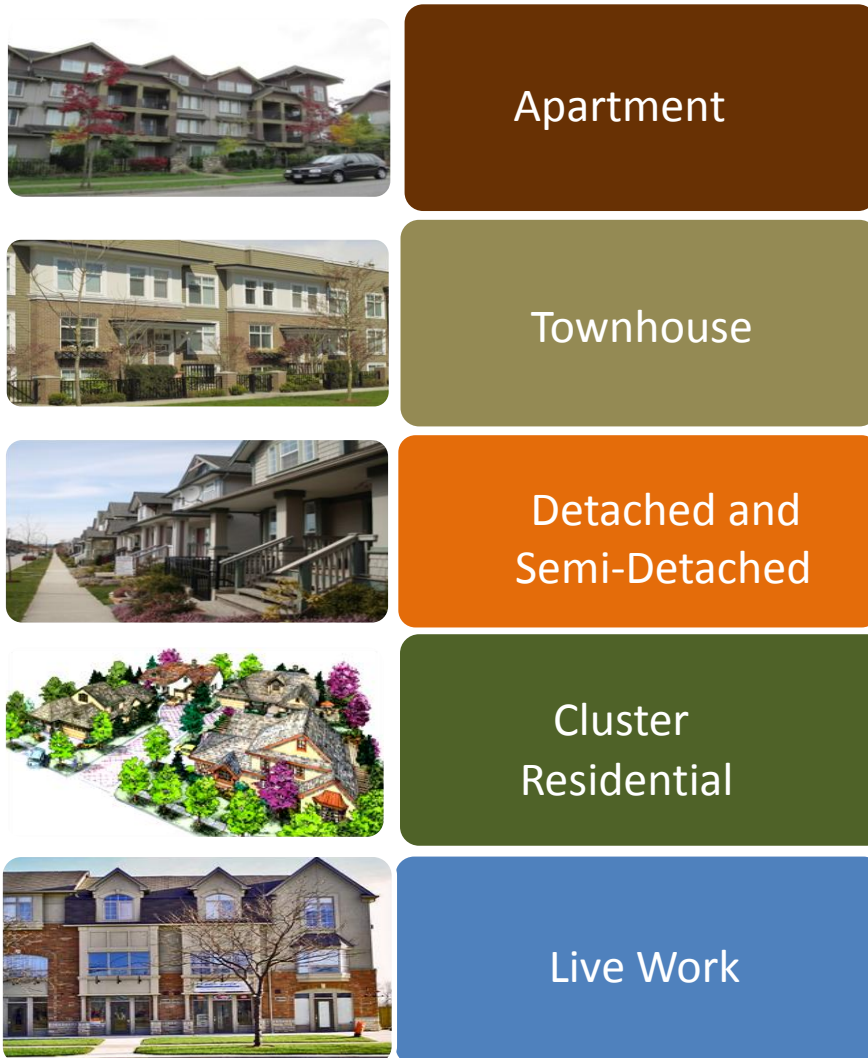
Residential Planning Principles



Residential Areas in Anniedale-Tynehead NCP

The Anniedale-Tynehead Land Use Plan identifies ten (10) separate designations allowing for primarily residential use, three (3) of which describe primarily single family densities, four (4) which describe multiple family densities ranging from attached housing to townhouse and rowhouse development, and two (2) which describe multifamily development consisting of low-rise apartment developments. Approximately 156 hectares (385 acres) of the Anniedale-Tynehead land area is proposed for exclusive future residential use.

The Residential Land Use Policy standards and design guidelines are organized into the following five (5) land use categories which include:





Apartment Residential (25-45 UPA)

The High Density Residential (25-45 upa) designation is intended to provide the majority of the apartment type residential uses. The designation is located in such a manner as to support Anniedale-Tynehead's commercial and employment areas and be close to existing and future transit routes along 93A (Ridgeline Drive) and 96 Avenue.

Permitted uses include four to six storey apartments, with six stories adjacent to transit and commercial uses, and four storey next to townhouses. In the context of the Anniedale-Tynehead Plan, all apartments will be required to provide townhouses at the base of apartments to promote a pedestrian friendly ground-oriented interface.

Public access along all riparian areas will be encouraged to promote walking connections for local residents.

Example of Upper-floor areas have private roof decks or balconies with underground parking

Summary of Development Guidelines for High Density Residential (25-45 UPA) Designation:

	APARTMENT RESIDENTIAL (25-45 UPA)
MAXIMUM DENSITY	25 to 45 Units Per Acre 0.9 – 1.3 Floor Space Ratio (adjustments to FAR may be considered for 6 storey developments and heritage preservation)
FORM OF DEVELOPMENT	Apartments with Townhouse base. (4 to 6 Stories)
POSSIBLE ZONES	RM-45, RM-30, RM-23, CD
MINIMUM LANDSCAPED PERMEABLE SURFACES	*No less than 25% *(May be reduced to 15% if Green Roof or Enhance Rain water management system is provided on-site) Meet the requirements listed in Table 3.3–5 ; developers may choose from among a variety of LID measures to meet the requirements, some examples of which are provided in Table A.2 in Appendix C
SETBACKS	Public interface setbacks along streets to be 4.5 m, additional setbacks along trails, greenways, buffers, and multi-use paths. Reduction in side yard provided that units orient to front and back, and the upper floors of the building step back.
TRAIL INTERFACE	May be required. (see Special Design Cross- sections)
RIPARIAN AREAS	Maximize retention of trees and natural features. Specific compensation may be required, see Part 4.2 - Environmental Management
MINIMUM LAND ASSEMBLY	Required. Refer to Land Consolidation Areas Part 4.0 of this document for more information.
HERITAGE	Incorporation of heritage resources (Witzer Residence) into the larger comprehensive development site. (see Heritage Part 4.5)
DESIGN CONSIDERATIONS	Incorporate lumber theme, consider views corridors. See Design Guideline for Apartment Residential Areas and Placemaking and Identity in Part 2.6

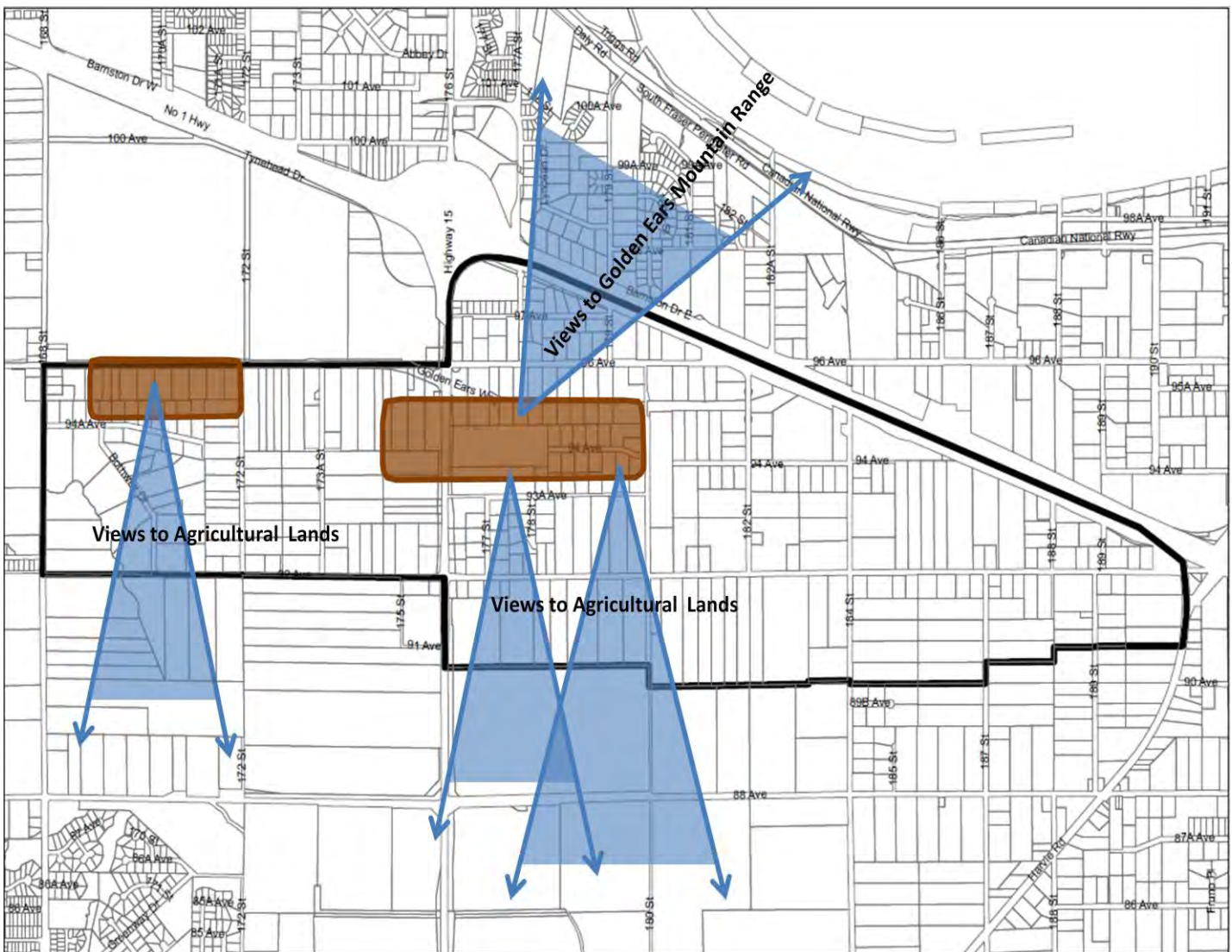
Design Guidelines for Apartment Residential Areas

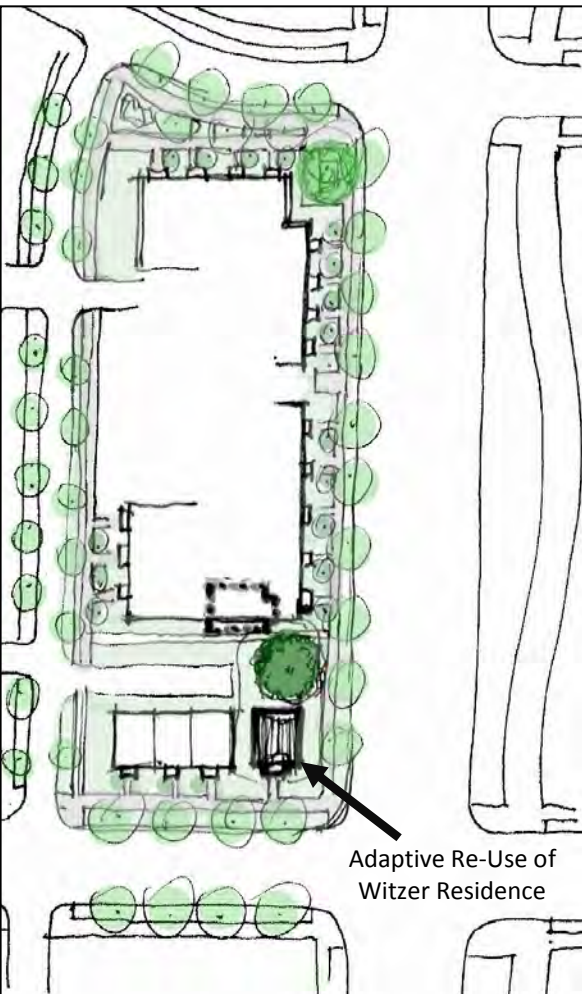
In addition to the OCP Guidelines, the following apply to Apartment Residential developments:

I: Context and Neighbourhood Character

Views

- Each development site should seek opportunities to provide a public viewpoint by analysing the site for possible views of the pastoral agricultural and river valleys, the north mountains particularly the northeast Golden Ears Range.





History and Identity

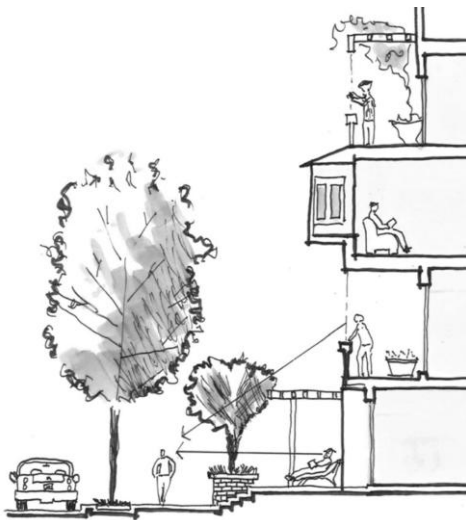
- Where heritage resources are located on development sites, they should be rehabilitated on site where possible and integrated into the overall site development (refer to **Part 4.5** Heritage Area Guidelines). This can be achieved by;
 - locating the heritage building prominently and along streetscapes,
 - stepping down massing to relate to the scale of the heritage building and;
 - incorporating similar material details and treatments into the architectural design.
- **The Witzer Residence** (9367180 Street), a historic building, has been determined to have recognizable heritage significance through the Heritage Register evaluation process.
- Development on the Harbidge House site should not occur until the protection and restoration of the building is secured in a manner satisfactory to the City (e.g., heritage revitalization agreement).
- The Witzer Residence should be incorporated into the design of the site. Adaptive re-use could include uses such as an amenity building, commercial retail or community service use.
 - A Heritage Revitalization Agreement (HRA) should be entered into for this site. Relaxations for setbacks and use can be incorporated into the HRA.
 - Consolidation with adjacent property should be considered to allow sharing of Costs and comprehensive development of the sites (See **Part 4.0**).
 - Transfer of density would allow flexibility with overall Floor Area Ratio for the site.

Image and Character

Historically, the northern portion of the Tynehead area was home to several sawmills. A plank road was located along portions of the current hydro and gas corridor. Incorporation of the plank road theme and lumber elements will be required in the development of apartment units.



II: Site Design



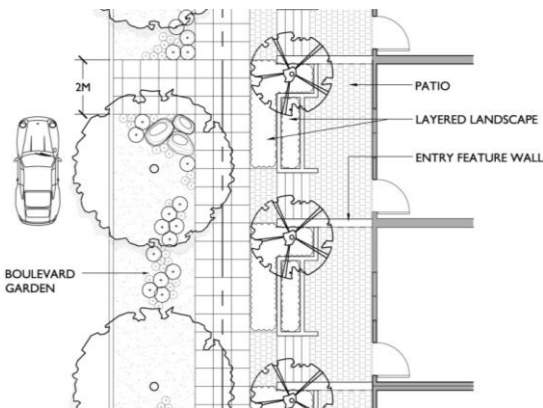
- Sites with sloping grades should step with the natural grades. This can be achieved by;
 - establishing the site grades at the early stages of design, and
 - incorporating a gradual transition so that retaining walls are avoided.
- Parking should be located underground.
- Visitor parking adjacent to lanes can be considered provided outdoor amenity for residents has been achieved.
- Driveway ramps should be provided from the lane to preserve the street frontages as safe and walkable for all users.
- Private and public space should be clearly delineated, without sacrificing opportunities for casual observation of public spaces.
- Public Rights of Passage through development site should be considered that connect Public Streets.
- Adequate bicycle parking and storage areas should be provided.
- For sites located on the escarpment (south of the 94A/93A or Ridgeway Drive) a 7.5m yard should be maintained to provide a 5m significant tree row along the south property line: The tree row should be predominantly native conifers;
- Underground parking should be setback from the south property line to allow for tree growth.
- Where a site is adjacent to a riparian area, provide a 2m walkway along the riparian frontage and connect to walkway system on adjacent sites for the use of the local residents. (See **Part 4.3** Riparian Areas)



III: Public Realm and Street Interface



- Units should be located close to a public street (4.5 metre setback) with a principal façade and ground oriented entry facing a street or public open space. For building's interior to the site, the main entrance should be oriented toward the interior driveway and where applicable, the amenity area(s).
- Architectural design on all elevations should be consistent with the massing and proportions of the buildings contributing to a human-scaled street edge through providing townhouse units at ground level, as well as use of porches, entryways, cornices and overhangs.
- Units developed in the Tynehead portion of the plan should be designed to face the Hydro-gas right-of-way and multiuse trail. (See **Figure 3.1**)
- Each development site should seek opportunities to provide public open space along streets or at corners where associated with the building entrances.
- Express individual front yards:
 - Stepping planters up to raised patios with a maximum of 0.6 m height of wall faced with high quality, durable material facing such as masonry (stone or brick) or specialty concrete and low planting in front of the wall.
 - Enhance each townhouse entrance with a tree planted in-ground and specialty treatments such as gate markers.
 - Enrich the interface with distinctive character elements such as art features and historical references.



Landscaping and Fencing

- Provide for a minimum 5m landscape Buffer directly adjacent to Commercial Areas. (See **Figure 3.3**)
- The planting of edible plants and fruiting trees is encouraged in outdoor amenity areas.
- Provide high quality and low maintenance vegetation by: maximizing native species, and planting fruiting trees and shrubs that support pollinator species.
- Fences are not desirable in the front yard areas; shrubs, trees and hedges are recommended. If fences are unavoidable, an open-style fence in combination with landscaping and a low stone or brick faced wall as a base is encouraged. Front yard fences should not be higher than 1 metre (3 feet).



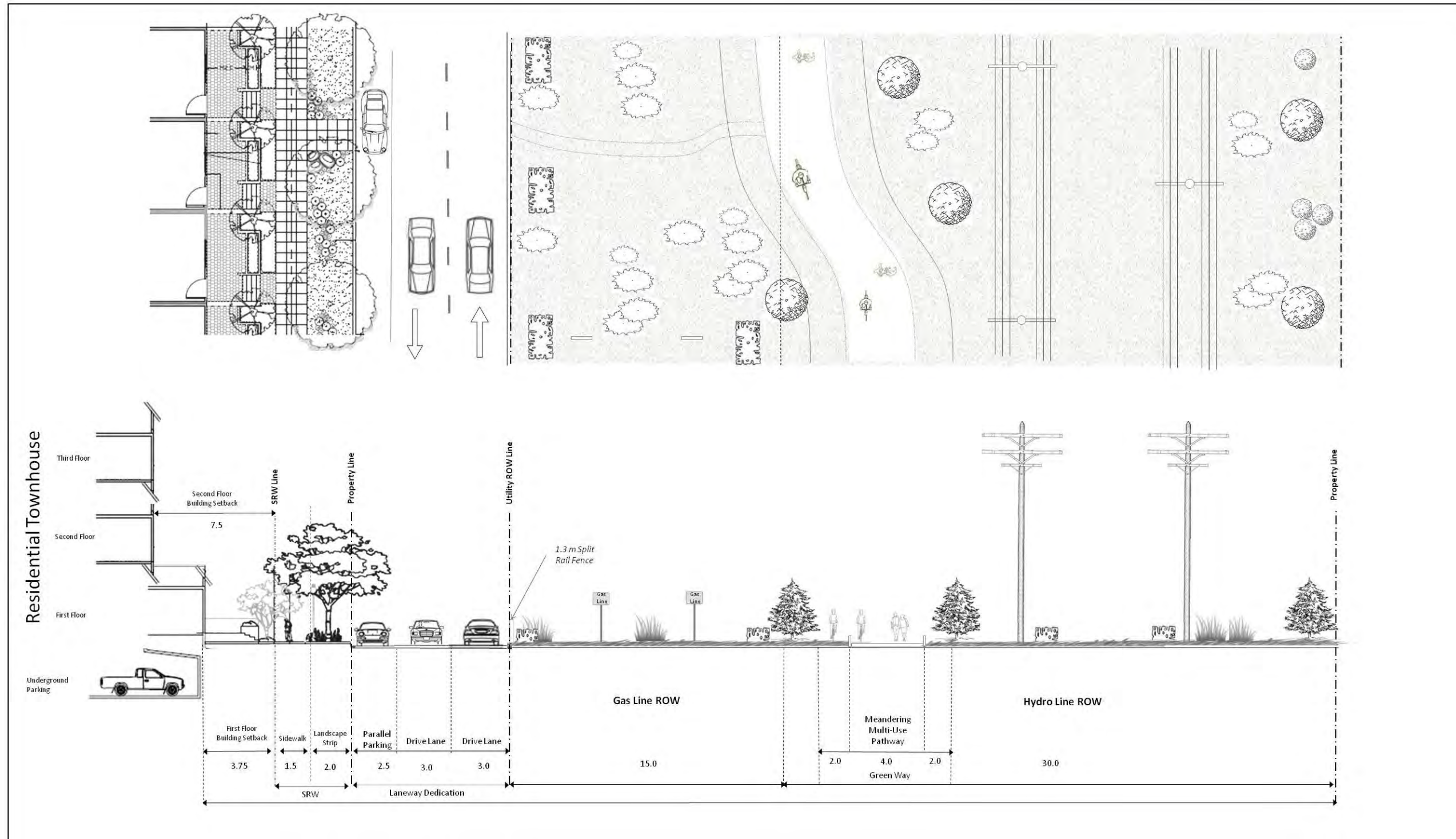


FIGURE 3.1
 APARTMENT INTERFACE
 AGAINST HYDRO AND GAS
 RIGHT-OF-WAY (TYNEHEAD)



Street Furnishings

- Draw on the street furnishings palette in **Part 3.9** to provide a coordinated group of furnishings including benches, waste receptacles and tree grates to match the overall character of the development and other site features such as bike racks, signage and service enclosures.

Vehicles and Parking

- Off-street Parking should not be permitted between the street and the principal façade of the building.
- Off-street Parking areas should be screened from the public street through landscaping.
- On-Street parallel parking is encouraged on public roadways in Apartment Residential Areas.



Services and Utility Areas

- Where possible, utility elements and equipment should be located away from publicly exposed views, and are discouraged from being located in the front yard or flankage yard of a corner lot.
- Where utilities are required to be located in the front or flankage yards, the utilities should be located in a discreet area or screened from public view through landscaping or other screening mechanisms.



IV: Building Form and Character



- Create building forms with a strong street enclosure particularly at corners.
- Orient building forms to line the streets including curved streets and the edges of open spaces.
- Incorporate two storey townhouses into the base of the building:
 - Front yard setback 4.5m along streets and lanes.
 - Step the main floor levels with the adjacent (sidewalk) grade and set a minimum of 0.6 m and a maximum of 1.5 m above grade.
- Create a 2 storey townhouse expression integrated into the overall building form:
 - Express a strong sense of individual entry porch at the street level with weather protection over each entrance.
 - Orient front doors and porches to face the streets with steps aligned with the front door and straight from the street (not turned).
- Incorporate durable and high quality materials such as brick masonry which address weathering and maintenance issues.
- Use muted buff colours with natural wood accents to blend into the hillside.
- Scale down facades into smaller scale elements through the use of windows, bays, balconies and dormers.
- Avoid large areas of one material i.e. vinyl siding.
- Incorporate specialty material treatments such as wood finishes on roof overhang soffits

V: Sustainability Features

- Promoting green certification and green building practices including: LEED certification, sustainable site development, water and energy efficiency, materials selection and indoor environmental quality.
- Composting and community gardening facilities are encouraged.
- Investigate opportunities for introducing geo-exchange heating and cooling systems or other alternative.



Townhouse Residential Areas (15-30 upa)

Residential densities of 15 to 30 units per acre (upa) in the form of townhouses and row-houses are proposed to be located adjacent to High Density Areas in the plan area. The housing form built under the Medium-High designation provides a suitable transition between the higher density multi-family areas and the lower density areas to moving south west and south east.

Medium-high density development may comprise of fee-simple row houses, and at the higher density range, integrated townhouse developments, are permitted between the ranges of 20 and 25 units per acre (Gross Density).

Emphasis is on recognizing the ground oriented neighbourhood character of this area of Anniedale-Tynehead, ensuring a good relationship of the units to the street and compatibility of design with other residential areas, and promoting a high number of ground-oriented units. Access to parking is provided via rear lanes or internal driveways; the units front and have direct pedestrian access from the street.

Summary of Development Guidelines for Medium-High Density Residential (15-30 UPA) Designation:

	MEDIUM-HIGH DENSITY RESIDENTIAL (15-30 UPA)
MAXIMUM DENSITY	15- 30 Units Per Acre / 0.6 – 0.9 Floor Space Ratio
FORM OF DEVELOPMENT	Townhouse or Row-houses. (2 to 3 Stories)
POSSIBLE ZONES	RM-30, RM-15, CD
MINIMUM LANDSCAPED PERMEABLE SURFACES	*No less than 25% *(May be reduced to 15% if Green Roof or Enhance Rain water management system is provided on-site) Meet the requirements listed in Table 3.3–5 ; developers may choose from among a variety of LID measures to meet the requirements, some examples of which are provided in Table A.2 in Appendix C
SETBACKS	Reduction of setbacks encouraged along trails and local streets to provide visual surveillance. Use of varied setbacks encouraged to provide articulation
TRAIL INTERFACE	May be required. Provide a 4m walkway adjacent to riparian areas (see Figure 3.3)
GREEN INFRASTRUCTURE MANAGEMENT	May be required. Tree Retention/ Parkland Dedication See Green Space Area Guidelines Part 4.3 and 4.4 and Figure 4.12
RIPARIAN AREAS	See Environmental Management Part 4.2
MINIMUM LAND ASSEMBLY	May be Required. Refer to Land Consolidation Areas Part 4.0 of this document for more information.
DESIGN CONSIDERATIONS	See Design Guideline for Townhouse Residential and Placemaking and Identity in Part 2.6

Design Guidelines for Townhouses Residential Areas

In addition to the OCP Guidelines, the following apply to Townhouse (medium density) residential developments:

I: Context and Neighbourhood Character

Views

- Public views of the agricultural lands to the south and Golden Ears Mountain Range to the north should be sought on each development site.
- Views of the treed escarpment, looking into the plan area, should be preserved and enhanced.
- The Cluster designations and tree buffers in yards along east/west property lines will be used as strategies for enhancing views and protecting the green hillside.
- Each development site should seek opportunities to provide a public viewpoint by analysing the site for possible views of the pastoral agricultural and river valleys, the north mountains particularly the northeast Golden Ears Range.



History & Identity

- Where heritage resources are located on a development site, rehabilitation on site and integration into the overall site development should be sought.

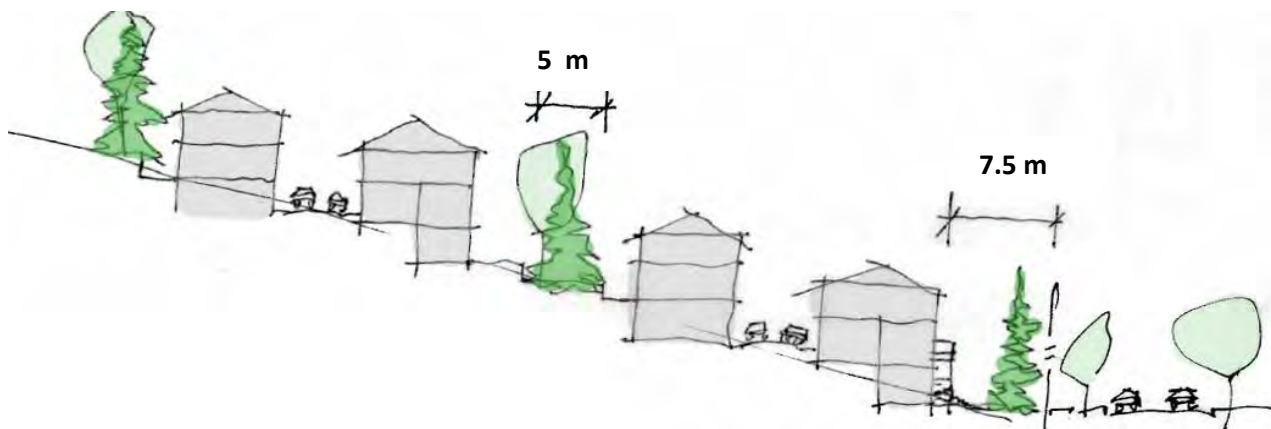
Image & Character

- Historically, farming made up a large part of the landscape in the Anniedale Area.
- The farming and pastoral theme should be integrated into redevelopment.



II: Site Design

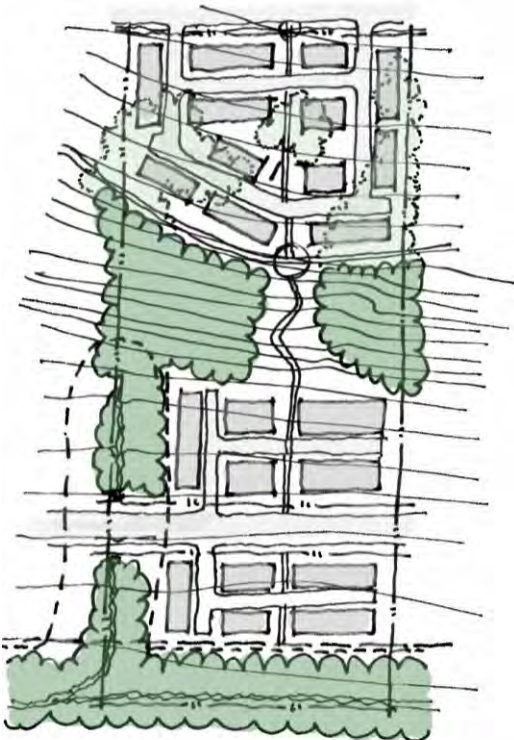
- Sites with sloping grades and should step new development with the natural grades. This can be achieved by;
 - establishing the site grades at the early stages of design, and
 - incorporating a gradual transition so that retaining walls are avoided.
- Where a site is adjacent to a riparian area, provide a 4m walkway along the riparian frontage and connect to walkway system on adjacent sites for the use of the local residents.
- On sites with fewer existing trees:
 - stands of trees should be infilled with trees, and
 - townhouse buildings should be spaced more widely to incorporate lines of conifer trees in front yards (7.5m front yard setback) and between townhouse yards (5m)
- For sites located on the escarpment (south of the 94A/93A (Ridgeline Drive), a 7.5m yard should be maintained to provide a 5m significant tree row along the south property line. The tree row should be predominantly native conifers.



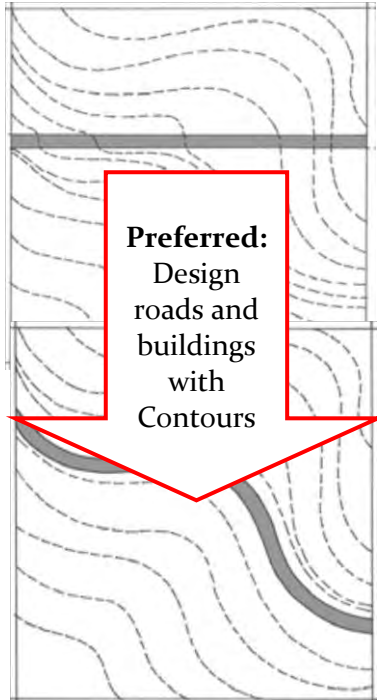


Escarpment Areas

- In hillside areas, such as those lands south of 92 Avenue, in Anniedale (if development with “flat-land” approaches to neighbourhood design can result in significant disruption to the natural terrain and views in an out of the NCP area.
- The purpose of Escarpment and Viewscape preservation is to protect the scenic and ecological resources associated with lands characterized by steep slopes, scenic ridgelines and ALR edge transition areas in a manner that allows for carefully designed, low-impact development. There are two compatible, alternative approaches that work with the natural landscape and preserve unique features in Anniedale-Tynehead:
 - Larger consolidation of lots (See **Part 4.1**) in steep slope areas along ALR edge: This approach facilitates the retention of natural slope conditions in all areas aside from the driveway and building envelope, and/or
 - Cluster development approach involves the clustering of development in flatter areas and the retention of remaining land as permanent open space through dedication to the City as parkland as proposed in **Figures 4.12** and **4.14**. This serves to protect steeper slopes and the natural integrity of hillside areas while also providing a greater variety of building forms. Using the clustering approach, there is typically more flexibility in terms of housing forms and tenure options, with consideration for multi-family dwellings (e.g. townhouses), small lot single detached development, and single-detached strata development. The overall intent is to permit similar development yields as may occur in a conventional subdivision, but to “cluster” these yields in flatter areas.
- For sites with clusters of trees on the hillside, the developable area should be focused away from the steeper treed slopes, and density transferred to the remaining portion of the site. Lands transferred as to the City for Park purposes. (See **Part 4.3**)
- For cluster townhouse developments, existing stands of trees on each site should be retained for the benefit of ecosystem management and for preserving the visible escarpment.



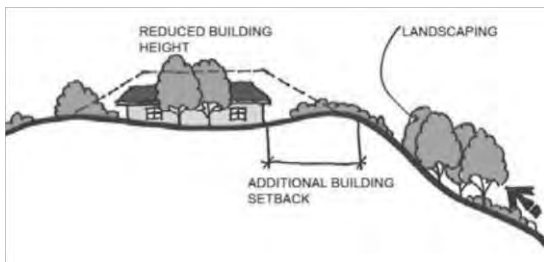
Development on the hillside can dominate views from below. Additional setbacks, landscaping and reduced building height may be used to mitigate view impacts towards ridgelines.



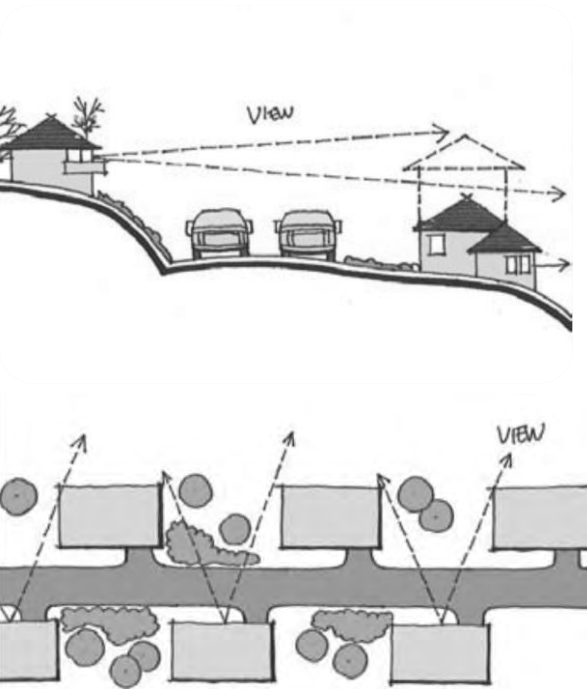
- Increase lot consolidation size as slope increases, to minimize the need for site grading works and to provide greater opportunities to protect unique hillside features through cluster development. In general, lots consolidation should be a minimum of 4 acres.
- Encourage the clustering of development onto flatter areas (e.g. slopes of 10% or less) as a means of minimizing site disturbance, protecting open space in steeper areas, and protecting the natural environment.
- Direct higher density development (e.g., townhouses, low rise apartments) towards road public road edges and away from the ALR.
- Locate development in areas with natural slopes of less than 15%, and preserve open space in areas with natural slopes of 15% or more.
- Consider alternative lot configurations (e.g. wide/shallow lots) to reflect unique site conditions

Ridgelines:

Preserve the natural qualities of ridgelines for the benefit of the community-at-large. To minimize view impacts to the ridgeline, development should:



- provide additional setbacks from the top of ridgeline; and/or
- preserve tree clumps or plant trees and vegetation to screen development; and/or
- reduce building height to ensure that new development has a low profile on the ridgeline.
- Ensure adequate trees to preserve vegetation at top of ridge.



Building Siting and Orientation:

In hillside areas buildings should be oriented to minimize view impacts and grading requirements.

Guidelines:

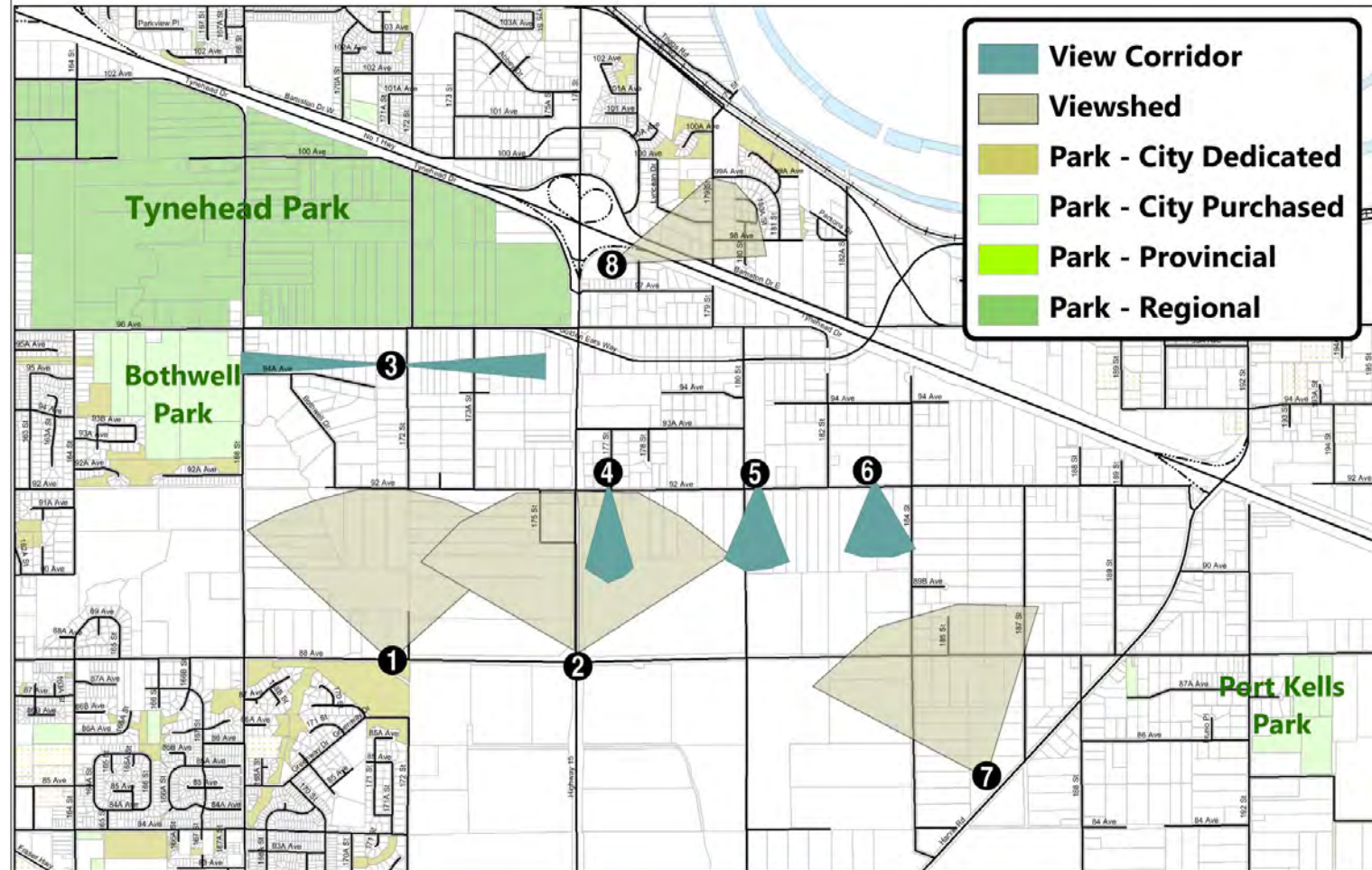
- Orientate buildings so that they run parallel with the natural site contours to reduce the need for site grading works and to avoid high wall facades on the downhill elevation.
- Reduce front yard setbacks as a means to alleviate the need for steep driveways.
- A generally consistent building line should be preserved along street frontages, and any reductions in setbacks should not result in large differences between the setbacks of adjacent homes.
- Site buildings to minimize interference with the views from nearby (uphill) buildings.

Colours, Reflectivity and Lighting:

- In hillside areas, all structure and accessory uses should be constructed and maintained so that predominate exterior wall colours (including the colours of basement walls on the downhill side of the structure) and roof surfacing materials:
 - Repeat the colours found most commonly in the land and vegetation around the building (earth tone);
 - Reflective materials and bright colours that contrast dramatically with colours of the land and vegetation around them should not be used as predominant colors on any fence, wall or roof surface.
- Floodlighting should not be used to light all or any portions of any primary or accessory structure façade, and all outdoor light sources mounted on poles, buildings or trees to illuminate streets, sidewalks, walkways, parking lots, or other outdoor areas should use full cut-off light fixtures.



Visual Resource Management--Anniedale/Tynehead



1 Looking north from 88th Ave towards South Port Kells



2 Looking north from 88th Ave towards South Port Kells



3 Looking west along the gas right of way--Green Timbers Greenway in the distance



4 Looking south from 92 Ave at 177 St into the ALR



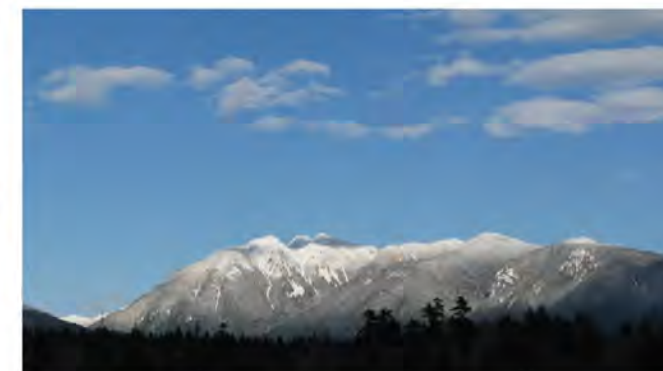
5 Looking south from 92 Ave at 180 St into the ALR



6 Looking south from 92 Ave and 183 St



7 Looking north-west from Harvie Rd

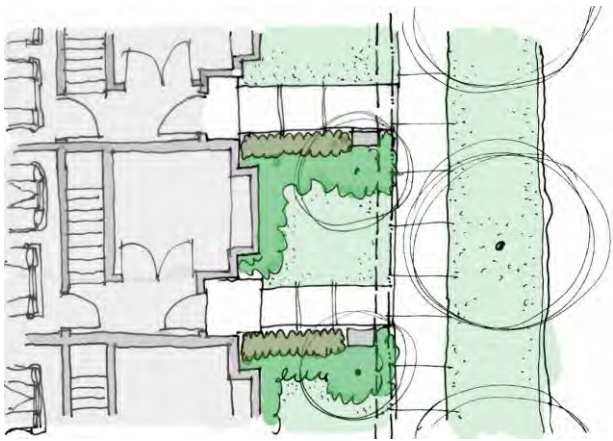
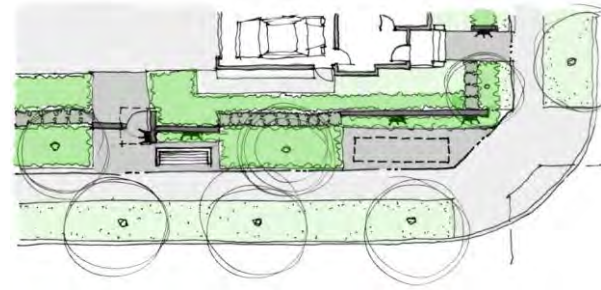


8 Looking north-east from Anniedale Traditional School



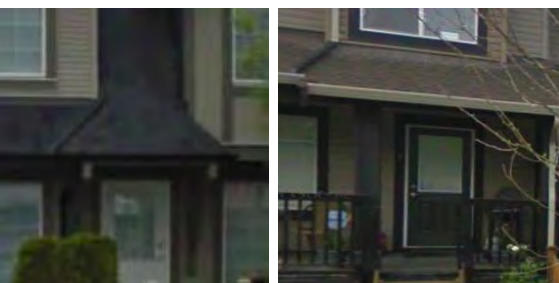
FIGURE 3.2
View Corridors and Viewsheds – Anniedale Tynehead NCP

III: Public Realm and Street Interface

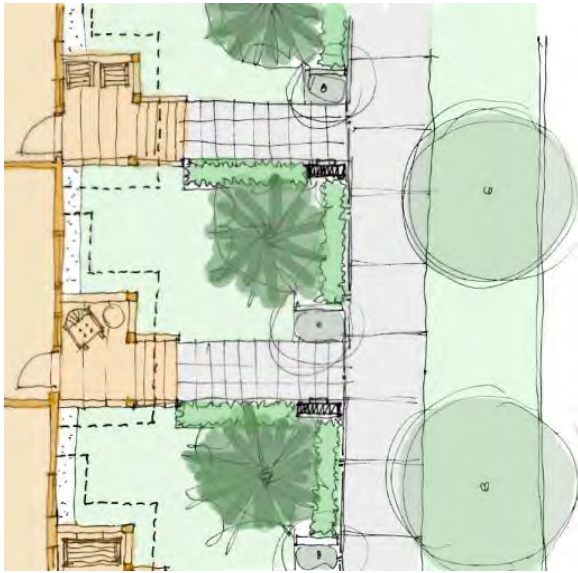


- Each development site should seek opportunities to provide public open space at corners.
- Define the street interface by incorporating low hedge landscaping and/or open fencing in yards along streets and other public areas set back a minimum of 0.5 m from the property line with additional setback articulation for added visual interest such as at entrances.
- Where fencing is proposed, it should also be in character with the history of the area using wood detailing such as open rail or picket.
- Enhance each townhouse entrance with a tree planted in-ground and specialty treatments such as gate markers.
- Draw on the street furnishings palette in **Part 3.9** to provide a coordinated group of furnishings including benches, waste receptacles and tree grates to match the overall character of the development and other site features such as bike racks, signage and service enclosures.

V: Building Form and Character



- Colours and materials of building should muted to blend into the hillside.
- Express a strong sense of individual entry porch at the street level with weather protection over each entrance in character with history of the area;
- Provide a porch element at individual entrances along the street,
- Use a low slope hip and shed style roof for porches.



- Buildings should have higher slope gable end elements on the facades and creating a street rhythm with the porch elements.
- Windows can reflect historic sizes and proportions in the walls.
- Use durable and high quality materials which address weathering and maintenance issues. This can include materials in character with the history of the area such as wood or cementitious horizontal siding or shingles. Large areas of vinyl siding should be avoided.



Medium Density (10-15 upa)

This designation allows for a variety of housing forms but with a primarily single small single family residential character. The designations allowing for a wide range of housing types including small lot single family homes with secondary units or couch homes, two-family units (Duplex), triplex units or quadplex units such as manor homes (On corner lots)– all within the same block and all maintaining a strong single family residential feel.

A mix of housing unit types is encouraged throughout a block.

Access to parking is provided via rear lanes and/or internal driveways, and units have direct pedestrian access from the street.

Summary of Development Guidelines for Medium Density Residential (10-15 UPA) Designation

	MEDIUM DENSITY RESIDENTIAL (10-15 UPA)
MAXIMUM DENSITY	10- 15 Units Per Acre / 0.5 – 0.6 Floor Space Ratio
FORM OF DEVELOPMENT	Small lot Single Family, Duplex, Triplex, or quadplex such as Manor Homes on corner lots, and potential for fee-simple Row-houses in 15 UPA range (2 to 3 Stories)
POSSIBLE ZONES	RF-9, RF-9C, RF-SD, RF-12, RF-12C, CD
MINIMUM LANDSCAPED PERMEABLE SURFACES	*No less than 15% *(May be reduced to 10% if Green Roof or Enhance Rain water management system is provided on-site) Provide 300 mm of amended growing media (“top soil”) for all yard area; discharge roof leaders directly to yards, not to the storm sewer
SETBACKS	Reduction of setbacks encouraged along trails and local streets to provide visual surveillance. Use of varied setbacks encouraged to provide articulation
RIPARIAN AREAS	See Environmental Management Part 4.2
TRAIL INTERFACE	May be required. Provide a 4m walkway adjacent to riparian areas (see Figure 3.3)
HERITAGE GUIDELINES	Rae House should be incorporated into the redevelopment of the site. Density bonus may be considered. See Heritage policy Objectives in Part 4.5
MINIMUM LAND ASSEMBLY	May be Required in Part 4.0 . Refer to Land Consolidation Policy section of this document for more information.
DESIGN CONSIDERATIONS	See Design Guideline for Detached and Semi-Detached and Place Making and Identity in Part 2.6



Low Density Urban (6-10 upa)

This designation allows for single family homes (with or without secondary suites and/or coach house units) and duplexes on standard and shallow/wide lots of approximately 320 m² to 560 m² (3,440 to 6,000 sq. ft) with and without lanes.

Development in this zone should provide as many lots as possible having rear land access to a garage. Achieving this objective may not always be feasible in all sites as existing subdivision pattern and terrain conditions change throughout the neighbourhood. However, all lots with a coach house must have rear lane access and a minimum of 60% of all lots should have rear lane access.



	LOW DENSITY RESIDENTIAL (6-10 UPA)
MAXIMUM DENSITY	6 to 10 Units Per Acre / 0.5 – 0.6 Floor Space Ratio
POSSIBLE ZONES	RF12, RF12C, RF, CD
MINIMUM LANDSCAPED PERMEABLE SURFACES	Provide 300 mm of amended growing media (“top soil”) for all yard area; discharge roof leaders directly to yards, not to the storm sewer
SETBACKS	Reduction of setbacks encouraged along trails to provide visual surveillance.
RIPARIAN AREAS	See Environmental Management Part 4.2
TRAIL INTERFACE	May be required. Provide a 4m walkway adjacent to riparian areas (see Figure 3.3)
MINIMUM LAND ASSEMBLY	May be Required in Part 4.0 . Refer to Land Consolidation Areas section of this document for more information.
DESIGN CONSIDERATIONS	See Design Guideline for Detached and Semi-Detached Place Making and Identity in Part 2.6



Rae House (9153-189 Street)



Design Guidelines for Detached and Semi-Detached Residential Forms

I: Context and Neighbourhood Character

History & Identity

- **The Rae House** (9153 189 Street) an historic building, has been determined to have recognizable heritage significance through the Heritage Register evaluation process.
- Development on the Rae House site should not occur until the protection and restoration of the building is secured in a manner satisfactory to the City (e.g., heritage revitalization agreement).
- Adaptive re-use and density bonus could be used as strategies for preservation. Setbacks can be varied with through an HRA.

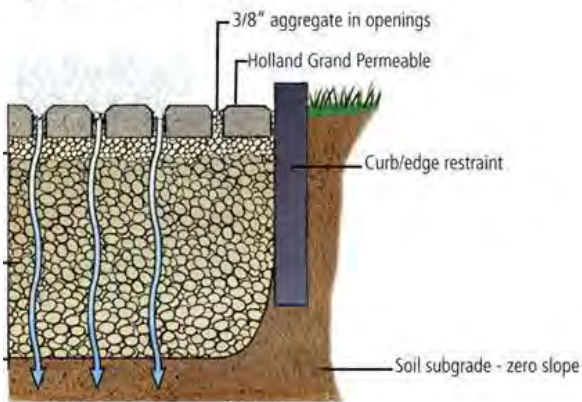
II: Streetscape and Built Form

- Houses on corner lots will be architecturally unique, and shall face the street on both sides.
- Manor Houses on corner lots are encouraged.
- Units shall have articulated facades and architectural features such as bay windows, roof projections and gable ends facing a public street. Entries should retain a human scale and relate to the street.
- Steep gable roofs and dormers are encouraged.
- Utilize high quality materials and finishes (ie. wood, stone, and masonry). Vinyl siding as the primary cladding material is not permitted.
- Front porches and verandas with overhangs that define a semi-private area in front of the unit are strongly encouraged.
- Front yards should clearly delineate public and private space through the use of natural low landscaping, and low, open-style fencing.
- Dwelling units should be designed to ensure a maximum amount of natural light to penetrate the unit.

III: Vehicles and Parking

- Garages, ancillary dwellings (coach houses) and structures must be accessed by a rear lane.

Typical Permeable Paver Installation



IV: Landscape and Environment

- Front yards should clearly delineate public and private space through the use of natural low landscaping, and low, open-style fencing.
- Identify, preserve and incorporate existing trees where possible.
- Promoting high quality and low maintenance vegetation by: maximizing native species and drought resistant material, and planting fruiting trees and shrubs that support pollinator species.
- Sites abutting riparian areas with trail refer to **Figure 3.3** for cross section detail.

V: Sustainability Feature

- Use of permeable surfaces for driveways and other paved areas is strongly encouraged.
- Promoting green building including: sustainable site development, water and energy efficiency, materials selection and indoor environmental quality.

VI: Coach Houses

- Where coach houses are permitted, the following apply:
 - A minimum lot depth of 35 metres (115 feet) and lot width of 10 metres 32 (feet) is achieved in order to ensure sufficient on-site parking and outdoor amenity space.
 - One additional parking space is provided for the coach house occupant on site.
 - The coach house is setback 1.2 metres (4 feet) from the lane in order to provide additional on-site parking opportunities and in order to avoid a canyon effect in the lane.
 - Additional outdoor space, such as balconies are required for the inhabitants of the coach house.
 - Steep gable roofs and dormers are encouraged. Most of the habitable space of the coach house should be contained within the roof gable to minimize massing.
 - A minimum separation of 6 metres (20 feet) should be provided between a coach house and the principal unit. Breezeway connections to the principal building are not permitted.
 - Where a coach house is situated near a public street or entrance to a lane, the façade should be articulated to address both the public street and the lane. The number and size of windows should be maximized. The lots at the intersection of a public street should be 13 metres (43 feet) wide in order to allow sufficient landscaping and articulation of facade.



Wheel strips provide a stable base for vehicles; an unpaved driveway allows for increased infiltration.



Coach houses provide appropriate Building setbacks and lot depth to accommodate on site yard space.

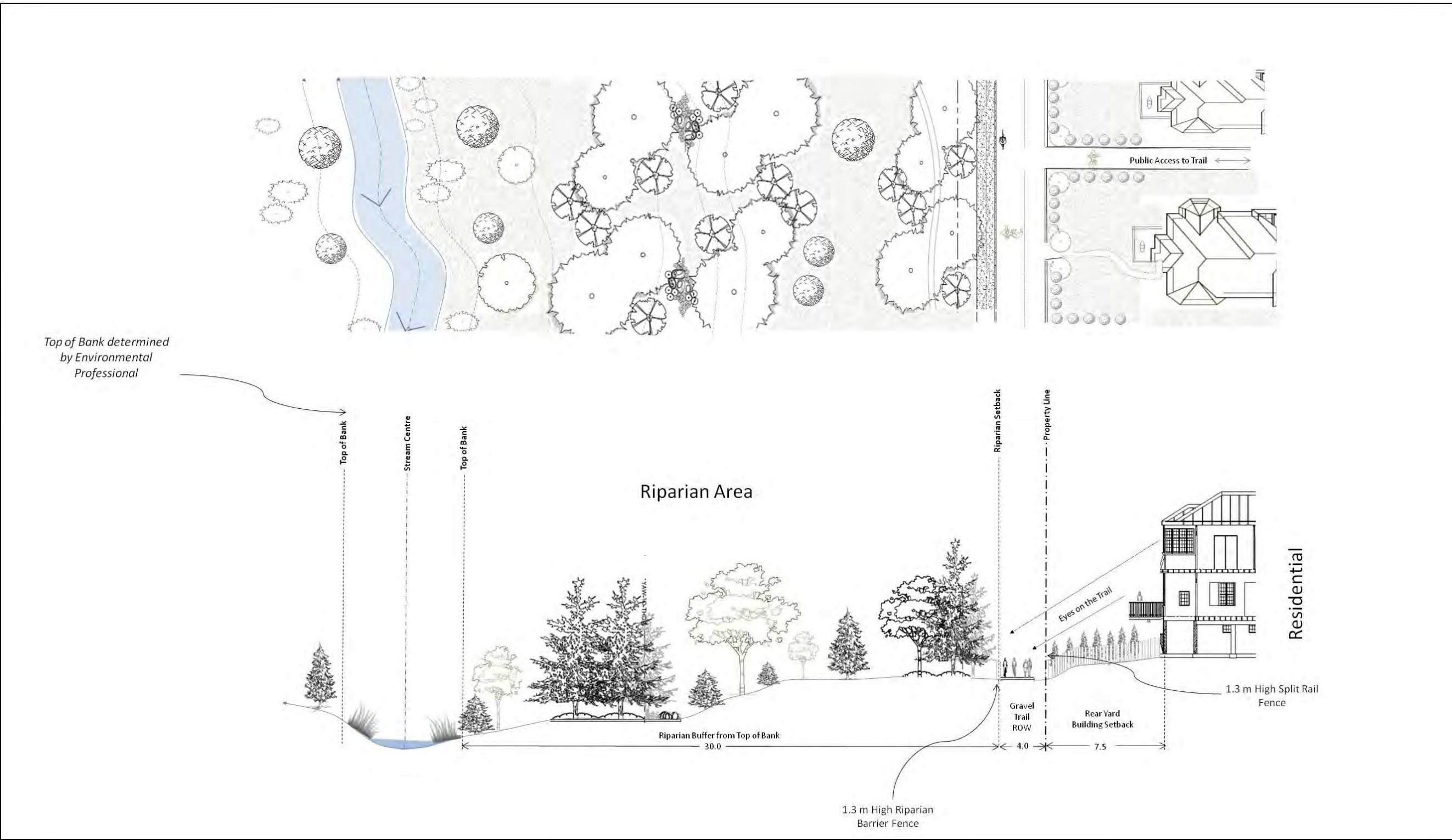
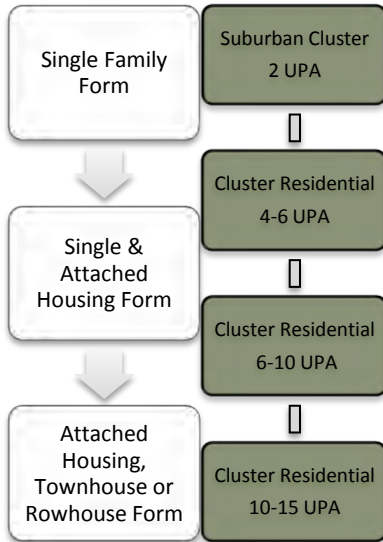


FIGURE 3.3
Residential Interface along Riparian Areas with adjacent trails. (Tynehead)

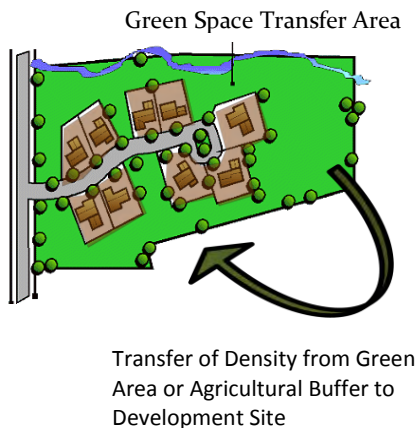
3.2 CLUSTER RESIDENTIAL AREAS



The Cluster Designation allows for the development value (unit density) associated with one section of a property to be transferred and added to the amount of units available on another section of a property. These designation areas are for the redirection of development potential from one location to another in a way that is fair and equitable to landowners, while supporting community development, agricultural, urban planning and environmental goals.

The four (4) “Cluster Designation” areas enable the transfer of development potential at rezoning from “Green Space Transfer Areas” the City seeks to conserve/enhance or as Agricultural Buffer Areas the City seeks to improve and protect, to areas specifically designated to be developed.

Depending on the specific Cluster housing gross densities, there are a diversity of housing forms can be achieved by a combination of various housing types and densities depending on the amount of green space transfer (development units) available and site constraints. This combination of various housing types may be especially evident in residential cluster designation areas.



Cluster Housing Objectives

- Serves as a mechanism that permanently protects ecologically significant areas (Riparian areas, Significant Tree Patches, and Green Infrastructure) or agricultural buffer areas without the expenditure of public funds or long term enforcement of landscape maintenance;
- Is applied at a NCP level within prescribed Cluster Designation Areas;
- Provides a mechanism that restricts building on portions of land while providing equity to the private landowner in correlation with that restriction;
- Promotes preservation of green areas while allowing development to occur in predefined designated areas and near service infrastructure.

Refer to Cluster Development Guidelines for Density Calculations
(See Part 4.4)



Cluster Residential Designated Areas in Anniedale-Tynehead NCP



Suburban Cluster (2 upa)

The lowest residential densities, of 2 units per acre (upa) (gross densities) are proposed along the Southwest edge of the plan area in Tynehead between 168 Avenue and the Serpentine River in what is currently the 200 year flood plain area, to reduce environmental degradation and excessive fill.

Flexibility of lot size is provided to allow for single family lots which clustered together near existing roads, and away from Riparian and Flood Plain areas along the serpentine river. Green space transfer of densities for lands preserved outside Park dedication areas is accepted to reduce site disturbance and overall site coverage.

	SUBURBAN CLUSTER RESIDENTIAL (2 UPA)
MAXIMUM DENSITY	2 Units Per Acre (Gross Density) Refer to Cluster Development Guidelines Part 4.4
POSSIBLE ZONES	RC, RH-G, CD
MINIMUM LANDSCAPED PERMEABLE SURFACES	Not less than 15 percent of the site shall be conveyed as common open space. Provide 300 mm of amended growing media ("top soil") for all yard area; discharge roof leaders directly to yards, not to the storm sewer
GREEN INFRASTRUCTURE MANAGEMENT	May be required. Tree Retention/ Parkland Dedication See Green Space Area Guidelines Part 4.3 and Figure 4.12
BUFFER	May be Required. See Agricultural Edge Guidelines Part 4.1
TRAIL INTERFACE	May be required. Provide a 4m walkway adjacent to riparian areas (see Figure 3.3)
MINIMUM LAND ASSEMBLY	May be Required. Refer to Land Consolidation Areas Part 4.0 of this document for more information.
DESIGN CONSIDERATIONS	See Design Guidelines for specific building form.
RIPARIAN MANAGEMENT	May be required See Environmental Management Part 4.2



Residential Cluster (4-6 upa)

The 4-6 units per acre (upa) gross density cluster areas are located along the South East edge of the plan area between Bothwell drive and the Serpentine River, as well as the properties near the Tynehead ALR edge.

Flexibility of lot size is provided to allow for smaller urban lots clustered together away from Riparian areas and the Agricultural Land Reserve Edge. Green space transfer of densities for lands preserved outside Park dedication areas is accepted to reduce building and site coverage.

The techniques used to concentrate buildings may include, but shall not be limited to, reduction in lot areas, setback requirements, and/or bulk requirements, with the resultant open space being devoted to park land, or open space/amenity space for one or more uses.

	CLUSTER RESIDENTIAL (4-6 UPA)
MAXIMUM DENSITY	4-6 Units Per Acre (Gross Density) See Cluster Development Guidelines Part 4.4
POSSIBLE ZONES	CD
MINIMUM LANDSCAPED PERMEABLE SURFACES	Not less than 30 percent of the site shall be conveyed as common open space. Provide 300 mm of amended growing media ("top soil") for all yard area; discharge roof leaders directly to yards, not to the storm sewer
GREEN INFRASTRUCTURE MANAGEMENT	May be required. Tree Retention/ Parkland Dedication See Green Space Area Guidelines Part 4.3 and Figure 4.12
BUFFER	May be required. See Agricultural Edge Part 4.1
MINIMUM LAND ASSEMBLY	May be Required. Refer to Land Consolidation Areas See Part 4.0 of this document for more information.
DESIGN CONSIDERATIONS	See Design Guidelines for specific building form.
RIPARIAN MANAGMENT	May be required See Environmental Management Part 4.2



Residential Cluster (6-10 upa)

The 6-10 units per acre (upa) gross density cluster areas are located to the east of 184 street and around riparian areas in the Tynehead area of the plan.

Flexibility of lot size is provided to allow for smaller urban lots, attached housing, and manor homes (quadplex) clustered together away from ecosystem hubs, Riparian areas and the Agricultural Land Reserve Edge. Green space transfer of densities for lands preserved outside Park dedication areas is accepted to reduce building and site coverage.

The techniques used to concentrate buildings together may include, but shall not be limited to, reduction in lot areas, setback requirements, and/or bulk requirements, with the resultant remnant space provided as open green space being devoted to a green belt, park land, or open space/amenity space for one or more uses.

	CLUSTER RESIDENTIAL (6-10 UPA)
MAXIMUM DENSITY	6-10 Units Per Acre (Gross Density) See Cluster Development Guidelines Part 4.4
POSSIBLE ZONES	CD Zone based on RM-15, RF-12, RF(net)
MINIMUM LANDSCAPED PERMEABLE SURFACES	Not less than 35 percent of the site shall be conveyed as common open space. Provide 300 mm of amended growing media ("top soil") for all yard area; discharge roof leaders directly to yards, not to the storm sewer
GREEN INFRASTRUCTURE MANAGEMENT	May be required. Tree Retention/ Parkland Dedication See Green Space Area Guidelines Part 4.3 and Figure 4.12
BUFFER	May be required. See Agricultural Edge Part 4.1
MINIMUM LAND ASSEMBLY	May be Required. Refer to Land Consolidation Areas Part 4.0 of this document for more information.
DESIGN CONSIDERATIONS	See Design Guidelines for specific building form.
RIPARIAN MANAGEMENT	May be required See Environmental Management Part 4.2



Residential Cluster (10-15 upa)

The 10-15 units per acre (upa) gross density cluster areas are intended to allow flexibility of housing form and lot size including a mix of smaller urban lots, attached housing (duplex/triplex/quadplex), and larger townhouses away from the agricultural land reserve but within the same site. Green space transfer of densities for lands preserved outside Park dedication areas is accepted to reduce building and site coverage.

The techniques used to concentrate buildings may include, but shall not be limited to, reduction in lot areas, setback requirements, and/or bulk requirements, with the resultant remnant space provided as open green space being devoted to a green belt, park land, or open space/amenity space for one or more uses.

	CLUSTER RESIDENTIAL (10-15 UPA)
MAXIMUM DENSITY	10-15 Units Per Acre (Gross Density) See Cluster Development Guidelines Part 4.4
POSSIBLE ZONES	CD based on RM-30, RM-15 (net)
MINIMUM LANDSCAPED PERMEABLE SURFACES	Not less than 40 percent of the site shall be conveyed as common open space. Meet the requirements listed in APPENDIX C Table 3.3–5; developers may choose from among a variety of LID measures to meet the requirements, some examples of which are provided in Table A.2 in Appendix C
MINIMUM LAND ASSEMBLY	May be Required. Refer to Land Consolidation Areas Part 4.0 of this document for more information.
GREEN INFRASTRUCTURE MANAGEMENT	May be required. Tree Retention/ Parkland Dedication See Green Space Area Guidelines Part 4.3 and Figure 4.12
BUFFER	May be required. See Agricultural Edge Part 4.1
RIPARIAN MANAGMENT	May be required See Environmental Management Part 4.2
DESIGN CONSIDERATIONS	See Design Guidelines for Townhouse and Detached Semi-detached.



3.3 MIXED USE AREAS (LIVE-WORK)

The Special Residential (live-work) designation is located along 93A-Avenue (Ridgeline Drive), between Highway 15 and 180 Street. This segment of the street is envisioned as a “main street” area within the plan. The street will include the Live-work designation, along with a Community Centre, neighbourhood commercial, and High Density Residential.

The densities between 15 to 30 units per acre will allow the option to permit the small business use at grade within a townhouse form of development. The intent of the live-work area is to provide opportunity for individuals to run a small business from their homes, by allowing up to 30% of the floor area to be used for work-related uses.

Types of business may include: artist studios, small scale retail stores, personal service uses such as hair-salons, custom tailors, cafes, restaurants and professional office uses such as interior designers, law offices, accounting offices etc.

Objectives

- To encourage walking and cycling to local destinations and neighbourhood services;
- To encourage building design that emphasizes the pedestrian realm;
- To provide a form of affordable housing by allowing home owners to live and work at home;
- To provide homeowners opportunity to increase their quality of life by reducing or eliminating commuting times; and
- To support small-owner run businesses.



Ground floor businesses with direct access to the Street.



Row Housing containing ground floor retail and office space

Special Residential (15-25 upa) Mixed Use

A primarily residential area made up of triplex, quadplex, townhouses or row houses with the option of a small-scale, low impact retail or service commercial or other businesses as part of the residential units, between 15-30 units per acre. The small-scale neighbourhood businesses/commercial uses or providing 'Live-Work' areas are to be located at the ground floor of the residential units with direct access to the public street.

Flexibility of use will be encouraged at the ground level which will accommodate either residential or business uses associated with a residence.

Parking for residential units will be accessible from the rear with on-street parking provided for the businesses and commercial units along 93 A Avenue, and 177 Street.

	SPECIAL RESIDENTIAL (15 - 25 UPA)
MAXIMUM DENSITY	15-25 Units Per Acre
POSSIBLE ZONES	CD
MINIMUM COMMERCIAL SPACE	"live-work" space will be permitted to incorporate up to 30% of the ground floor area or a minimum 32 square meters) of each dwelling unit for small scale business/commercial purposes. The minimum size of the live-work area of 32 sq meters ensures space is large enough for a business to feasibly occur.
MINIMUM LANDSCAPED PERMEABLE SURFACES	Meet the requirements listed in Table 3.3–5 ; developers may choose from among a variety of LID measures to meet the requirements, some examples of which are provided in Table A.2 in Appendix C
MINIMUM LAND ASSEMBLY	May be Required. Refer to Land Consolidation Areas Part 4.0 of this document for more information.
DESIGN CONSIDERATIONS	See Design Guideline for both Townhouses and Design Guidelines for Special Residential Townhouses.

Design Guidelines for Mixed Use “Special Residential” Townhouses

In addition to the OCP Guidelines, and the Townhouse Guidelines in this document, the following apply to Special Residential developments:

I: Streetscape and Built Form

- Buildings that are located at the street edge and provide a continuous street frontage are strongly encouraged.
- Live-Work Entrances should be clearly defined and visible from the street with appropriate business signage space.
- Ground floor spaces should have windows and door which face directly onto the street.
- Entries should retain a human scale and relate to the street.
- The scale of special residential buildings should relate and be compatible to adjacent development.
- Corner buildings should be sited to address both streets with similar architectural treatments.
- Front porches and verandas with overhangs that define a semi-private area in front of the unit are strongly encouraged.
- Utilize high quality materials and finishes (i.e. wood, stone, and masonry). Vinyl siding as the primary cladding material is not permitted.

II: Living Space

- Dwelling units should be designed to ensure a maximum amount of natural light to penetrate the unit.

III: Work Space

- Incorporate up to 30% of the ground floor area or a minimum 32 square meters) of each dwelling unit for small scale business/commercial purposes.
- The minimum size of the work area is 32 sq meters to ensure the space is large enough for a business to feasibly occur.

IV: Vehicles and Parking

- Garages, ancillary dwellings (coach houses) and structures must be accessed by a rear lane.



Continuous street frontage



Windows and doors face the street.



Low landscaping delineates public and private space



On street-parking along live-work areas is encouraged.

V: Pedestrians and Cyclists

- Pedestrian and vehicle access and circulation within, an individual site should provide safe and well-defined routes.

VI: Landscape and Environment

- Front yards should clearly delineate public and private space through the use of natural low landscaping, or low, open-style fencing.
- Promoting high quality and low maintenance vegetation by: maximizing native species and drought resistant material, and planting fruiting trees and shrubs that support pollinator species.

VII: Services and Utility Areas

- Where possible, utility elements and equipment should be located away from publicly exposed views, and are discouraged from being located in the front yard or flankage yard of a corner lot.
- Where utilities are required to be located in the front or flankage yards, the utilities should be located in a discreet area or screened from public view through landscaping or other screening mechanisms.

VIII: Sustainability Features

- Use of permeable surfaces for driveways and other paved areas is strongly encouraged.
- Promoting green building including: sustainable site development, water and energy efficiency, materials selection and indoor environmental quality.



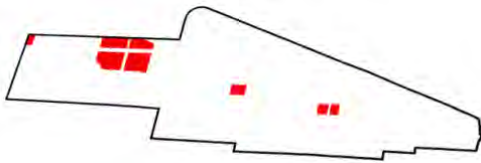


Figure 1 - Commercial Areas in Anniedale-Tynehead NCP

3.4 COMMERCIAL AREAS

The intent of the commercial areas are to encourage a mix of neighbourhood oriented commercial and regional commercial development of appropriate densities and forms so as to meet the needs of the residents of Anniedale-Tynehead and surrounding region, within the neighbourhood context of Anniedale Tynehead community.

The design and development guidelines provide direction for the development of commercial buildings that convey a neighbourhood character that will support pedestrian activity and connectivity to surrounding residential neighbourhoods.

The intent of the commercial area policies and development design guidelines are to:

- achieve interesting, high-quality architectural design for retail buildings which animate the street;
- enhance landscaping, public open space, and environmental performance of such developments;
- create comfortable and attractive pedestrian environments;
- enhance the streetscape along public streets and contribute to a high quality public space;
- protect and enhance the character and quality of neighbourhood where there is retail development;
- promote development patterns that may allow for future intensification of large format retails sites;
- incorporate the history of the area through the built form

These guidelines support the sustainable planning principles of the Surrey Sustainability Charter and two principles previously outlined in this plan, with a special emphasis on the following two Commercial planning Principles:

Principle No 1

- Provide local shopping opportunities in village centres in each neighbourhood to provide locally accessible neighbourhood services.

Principle No 2

- Create opportunities for smaller scaled, pedestrian oriented commercial spaces and designations where people can meet, such as cafes, coffee shops, and corner stores, during different parts of the day into the evening.

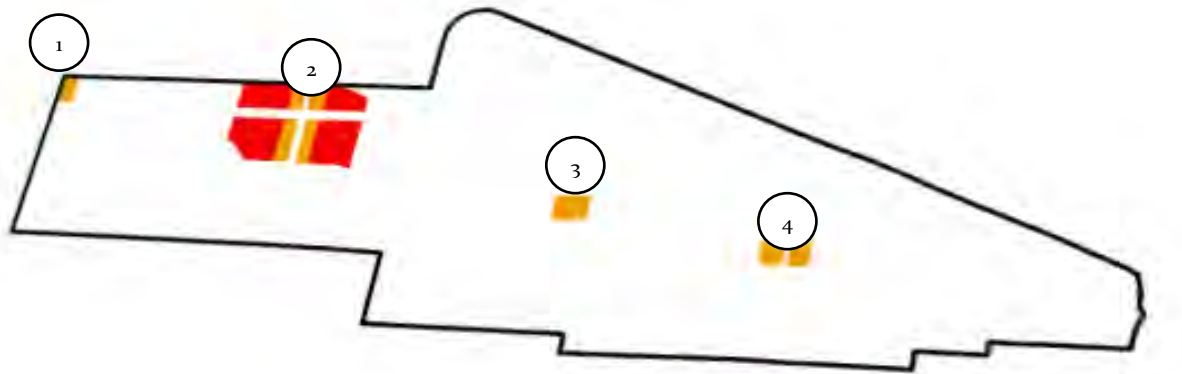
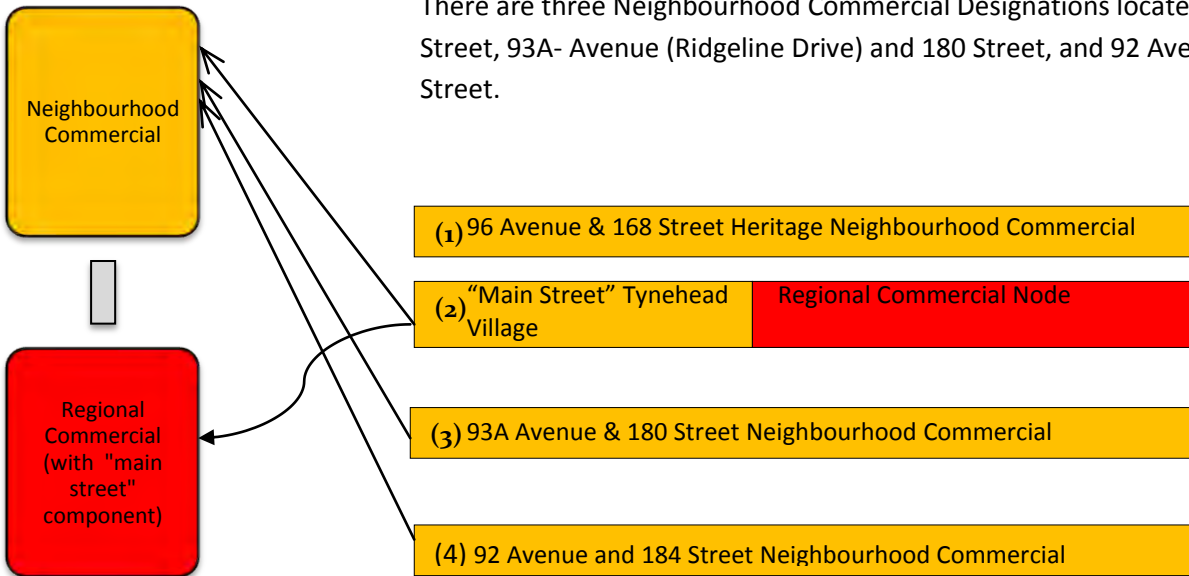
Figure 2 - Commercial Planning Principles

The Anniedale-Tynehead Land Use Plan identifies two (2) types of commercial designations allowing for primarily commercial use:

- Neighbourhood Commercial
- Regional Commercial with “Main Street” component

The Regional Commercial designation is located on the west side of Highway 15, south of 96 Avenue. This designation provides for a variety of commercial land uses including large format retail, grocery stores, restaurants, service commercial and other retail uses. The Commercial designation also allows for office uses. Commercial uses may be contained in a multi-tenant complex or in a freestanding building occupied by a single tenant. The Regional Commercial area will contain a “main street” village commercial component.

There are three Neighbourhood Commercial Designations located at 96th and 168 Street, 93A- Avenue (Ridgeline Drive) and 180 Street, and 92 Avenue and 184 Street.



Commercial (Large Format Retail)



The Land Use Plan proposes four major commercial nodes south of 96 Avenue surrounding a main street commercial area along 173 A Street (Tynehead Boulevard). Given this location's proximity to regional transportation routes, this commercial designation is intended to accommodate a larger, regional shopping centre.

As a gateway to the Tynehead residential area to the, west, east and south, careful attention must be given to the integrated planning and design of new development within these quadrants.

The development could also other uses such as Institutional (child care etc.) or Office.

The large format retail area will also include a "main street" shopping area, where the scale of the shops will be smaller.

Parking requirements for this retail format shall be as follows:

- Surface parking is limited to 3.0 spaces per 100 sq.m. of gross floor area .Additional parking beyond the 3.0 stalls per 100 sq.m. is permitted provided that it is contained below or above a building (roof-top) or in a parking structure.



	COMMERCIAL (LARGE FORMAT RETAIL)
MINIMUM LANDSCAPED PERMEABLE SURFACES	Meet the requirements listed in Table 3.3–5; developers may choose from among a variety of LID measures to meet the requirements, some examples of which are provided in Table A.2 in Appendix C
MINIMUM LAND ASSEMBLY	Land Consolidation will be required for the development of a regional shopping centre.
DESIGN CONSIDERATIONS	Incorporate Lumber and Sawmill Theme into development. See Design Guideline for Commercial Areas and Placemaking and Identity in Part 2.6
TRAIL INTERFACE	Incorporate Plank Road theme into Hydro ROW
BUFFER	See Commercial Design Cross- sections (Figure 3.4) 10m Planted Buffer along Apartment Site and Hedgerow Planting along street with non-residential interface



Neighbourhood Commercial

Lands designated as Neighbourhood Commercial provide a location for pedestrian oriented retail and service uses not readily available elsewhere in the nearby large format retail centre. The Neighbourhood Commercial area limits the size of the stores and provides specific policy guidelines along the Neighbourhood Commercial nodes as well as the main street village commercial frontage along 173A Street.

With the future growth of the Anniedale-Tynehead area, a Heritage Village area is also designated at the existing commercial corner of 96 Avenue and 168 Street. It is planned that this intersection will continue to evolve as a viable neighbourhood commercial centre, with a strong Heritage component linked to Tynehead Park, and the natural and built heritage components.

NEIGHBOURHOOD COMMERCIAL	
MINIMUM LANDSCAPED PERMEABLE SURFACES	Meet the requirements listed in Table 3.3–5; developers may choose from among a variety of LID measures to meet the requirements, some examples of which are provided in Table A.2 in Appendix C
MINIMUM LAND ASSEMBLY	May be Required. Refer to Land Consolidation Areas Part 4.0 of this document for more information.
DESIGN CONSIDERATIONS	Incorporate Lumber and Sawmill Theme into development. See Design Guideline for Commercial Areas and Place Making and Identity in Part 2.6
HERITAGE	Incorporation of Tynehead Community Hall into comprehensive development See Development Guidelines Part 4.5

Design Guidelines for Commercial Areas:

I: Context and Neighbourhood Character



Historically, logging was a key industry in the area. The Rideout Sawmill was located on future commercial (large format retail) site. Lumber was transported along skid roads to transport lumber from the sawmill up to the Fraser River. As land was cleared, agricultural practices became important as well.

Drawing from the history of the area, the large-scale retail format will incorporate distinctive and authentic historical and cultural elements into the design of the development.

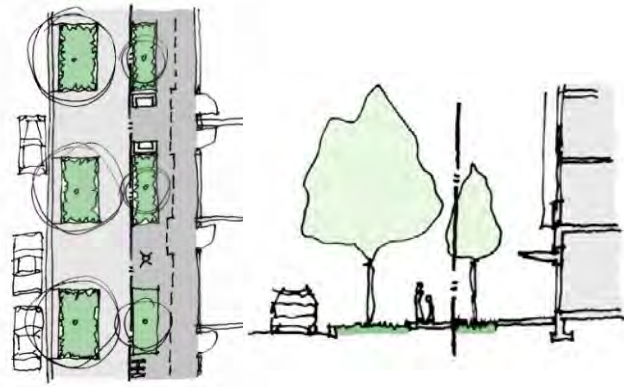
The use of a lumber and sawmill theme into the form of the commercial site allows the use of these elements in a contemporary way will help to give this commercial development a unique sense of place that is rooted in the history of this community.

A “plank road” was also located in the vicinity of what is now the gas/hydro right-of-way. This theme can be enhanced along the greenway proposed on the right-of-way.

The agricultural history can be included through the use of hedgerow plantings where buffers are required.

The Tynehead Community Hall is located at the proposed Neighbourhood commercial area at 96th Avenue and 168 Street. The development at this location is required to incorporate the Heritage Hall into the site design for the redevelopment of the future commercial site.





II: Site Design and Public Realm Interface

- Locate buildings along the street with parking located behind.
- Two storey buildings are encouraged particularly at corners to create a sense of street enclosure.

Commercial Street Interface:

- Provide a 3m setback along streets to achieve an inner row of trees on private property with in-ground planter panels.
- Provide specialty paving and details on the setback area (private property).
- Incorporate contemporary landscaping for in-ground planter panels such as rows of grasses and dwarf shrubs.



Where surface parking is located adjacent to roads:

- Create a small scale hedgerow along street frontages to reference the existing area and to screen views of parking areas
- Between breaks in the hedgerows and at corners, punctuate with low walls or defining fencing elements in character with the area.
- Incorporate stormwater management features into surface parking areas.
- Landscape the area in front of a blank wall that faces public streets, and use projections, recesses, arcades, awnings, colour and texture to reduce the visual size of any glazed walls.





Provide public open spaces:

- Create widened setbacks along streets rather than carved out corner spaces,
- Locate on sunny areas of streets,
- Take advantage of views such as looking over the agricultural valley,
- Incorporate specialty paving, features and art.
- A design feature (Gathering Amenity Space) will be provided as a focal point at the corners of 173A Street and 94 A Avenue (Round-about) and may take the form of an urban plaza, town square, and draw on the lumber and sawmill theme.



Regional Commercial with Main Street:

- The site layout should reinforce the street grid pattern such that future redevelopment to higher intensity can evolve along the future streets.
-
- The large format retail stores can back onto roads that do not have residential such as 96th Avenue.
- The greenway should continue on the gas right-of-way (coordinated with the utility surface treatment requirements) across the commercial site with a “Plank Road” character to reference the original road approximately in this location.
- Vehicular parking areas should provide direct driveways through the site to allow filtering of commuter traffic in addition to the “Main Street” and other public roads.
- Where back of the larger commercial faces non-residential streets, provide a significant landscape buffer of 6m.
 - Incorporate a hedgerow with significant trees to reference existing street character in the area,
 - The hedgerow can be an opportunity for ornate carving to create a distinctive character.





Create a Main Street and Village Centre

- Locate the street closely connected to the adjacent residential neighbourhood,
- Back of Main Street retail should not face residential streets, rather can back onto residential sites with a 6m landscape buffer,
- Locate retail on both sides of the street and on all four corners of blocks,
- Create walk-throughs to parking behind,
- Wrap retail windows and entrances around the street corners and walk-throughs,
- Coordinate walkthroughs with pedestrian crossing on streets,
- Provide angled parking along streets,
- Provide a 5.5m setback from the curb: 1m at parking curb, 1.5m in-ground planter panel, and a 3m sidewalk to the face of the building,
- Locate active uses at grade, such as restaurants, specialty in-store boutiques, food concessions and waiting,
- Provide site furnishings, such as benches, bike racks and shelters, at building entrances and amenity areas. (see Public Realm Furnishings Part 3.9)

Neighbourhood Commercial:

- Treat the utility right-of-way as a public frontage,
- Include Public Plaza areas with seating and amenities,
- Incorporate a 2m walkway along the outside of the riparian edge to facilitate non vehicular traffic through the area and connecting to the greenway on the utility right-of-way.

At the 168th Tynehead node;

- Locate future buildings with similar setbacks to the Tynehead Community Hall (kept in situ),

III: Building Form and Character

- Create an architectural vocabulary which draws upon the history of the area,
 - Provide a full roof expression for smaller commercial buildings,
 - Streetscapes image of grouping of simple roof forms
 - Open and closed building forms,
 - Heavy timber features
- Continuous weather protection with a depth of at least 1.5m to encourage all season protection and particularly at transit stops.
- Scale down long facades into smaller grain retail frontages.
- Locate interior uses such as seating areas, employee rooms, offices, waiting areas and lobbies, which have the potential for clear windows, along street-facing walls.
- Orient the front façade to face the public street and locate front doors to be visible, and directly accessible, from the public street.
- Design the façade of buildings with multiple uses so that each use is defined separately through individual signage, individual entrances and individual canopies.



Step the ground floor levels to match the adjacent sidewalk grades on sloping sites.

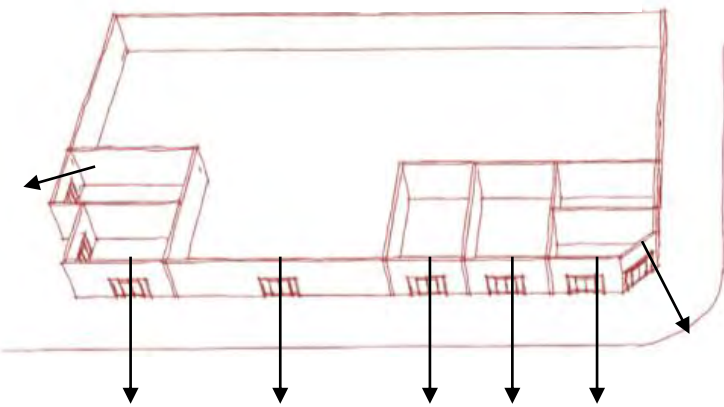
Express the individuality of each retail frontage with unique architectural details and features.

- Maximize the retail/commercial glass at the street frontage and avoid overhanging building arcades.

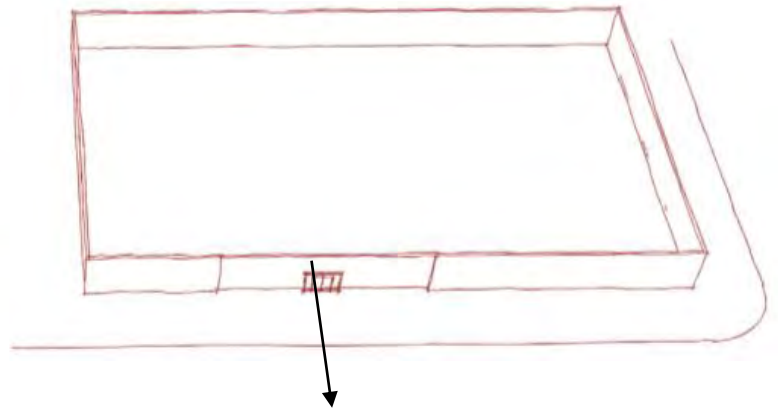
Regional Commercial including Main Street:

- Follow the theme for image and character focusing on authentic character based on the history of the area such as sawmills, timbers and plank roads throughout the development.
- Treat wrap around facades on corners and at walkthroughs as fully detailed front facades.
- Walkthroughs should be clearly visible without alcoves or backwater areas.
- Infill smaller units in the fronts of large format retail,
- Break-up the long facades of large commercial units with small shops addressing the public realm that wrap the larger commercial unit.

Do This: Multiple Small shops and Street Entrances



Don't Do This: Single Entrance and creation of Blank Walls





IV: Signage

- Create a coordinated signage concept for the site including specialty backing such as timber or brushed metal grille for mounting backlit channel lettering or neon.
- Blade signs mounted to the building should be considered along streets.

Regional Commercial including Main Street:

- Signage along major streets – 96th Ave can promote the awareness and image of the village and the major retailers at the corners of streets 172 and 173A.
- Freestanding signs should be low marker type signs with stencilled letters, a pediment and using high quality materials.



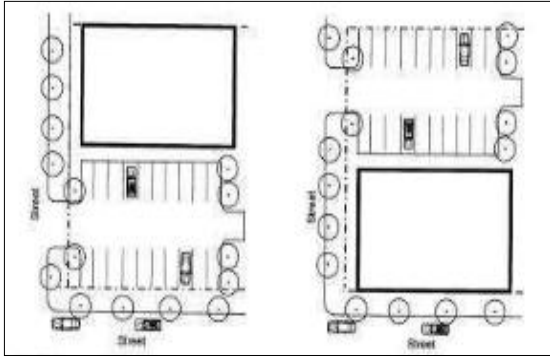
V: Pedestrians and Cyclists

- Provide direct, safe, continuous and clearly defined pedestrian access from public sidewalks, parking areas and transit stops to building entrances.
- Connect pedestrian walkways between adjacent properties in order to facilitate circulation between sites.
- Distinguish walkways from driving surfaces by using varied paving treatments and by raising walkways to curb level.
- Provide weather protection at building entrances, close to transit stops, and in areas with pedestrian amenities.
- Provide sheltered bicycle parking in visible locations near building entrances and pedestrian walkways. Ensure that these locations do not conflict with pedestrian circulation.
- Design the internal circulation pattern with direct connections to the surrounding streets.



Don't Do This

Do This



VI: Vehicles and Parking

- Link access drives and parking lots of adjacent properties in order to allow for the circulation of vehicles between sites.
- Share vehicular access to parking areas between adjacent properties in order to reduce the extent of interruption along the sidewalk and the streetscape.
- Design the site circulation to minimize the conflict between pedestrians and vehicles. This can be achieved by orienting car parking spaces to minimize the number of traffic aisles that pedestrians must cross.
- Locating off-street surface parking spaces at the side or rear of buildings.
- Surface parking is limited to 3.0 spaces per 100 sq.m. of gross floor area. Additional parking beyond the 3.0 stalls per 100 sq.m. is permitted provided that it is contained below or above a building.



Provide Site Circulation



Green Roof

VII: Sustainability

- Base new development on an internal circulation pattern that allows logical movement throughout the site that will accommodate, and not preclude, intensification over time.
- Incorporate a broad strategy for environmental sustainability including energy and greenhouse gas, site design, water, landscaping, passive solar.
- Incorporate green roofs on commercial buildings
- Incorporate rain gardens, infiltration swales, pervious pavements, reduced street widths and other low impact development strategies into the development.

V: Landscape and Environment



- Plant on street trees in accordance with the City of Surrey street tree requirements along public streets and between 7.0 and 10.0 metres apart along the length of internal pedestrian walkways. Plant trees in permeable surface areas, with a minimum of 10.0 square metres of soil area per tree at a depth of at least 30 centimetres. Street trees will be planted with an initial planting trunk diameter of not less than 5 centimetres measured 1.4 metres above finished ground. Tree selection and spacing is subject to final determination by the City of Surrey, Parks, Recreation and Culture Department.
- Select trees, shrubs and other vegetation considering their tolerance to urban conditions, such as road salt and drought. Give preference to native species outlined in the Surrey tree protection bylaw.
- Divide large parking areas into smaller and well-defined sections using soft and hard landscaping in order to minimize the amount of paved, non-permeable areas.
- Landscape any area between the building and the sidewalk with foundation planting, trees, street furniture, and walkways to public sidewalks.
- Define pedestrian walkways within parking areas with continuous planting areas consisting of trees and shrubs.
- Whenever possible catchment areas including, rain gardens, sodded areas and shrub beds should be constructed within parking areas to collect, store and filter stormwater on site in order to improve groundwater recharge.
- Install and maintain oil/water separators to prevent transportation of hydrocarbons from paved areas.
- Plant trees, shrubs, ground cover on any un-built portions of the site that are not required to meet minimum parking requirements. This includes any areas reserved for future long term phases of development.
- Use green building technologies such as green roofs, drip irrigation, and other Leadership in Energy and Environmental Design (LEED) approaches.
- Install 10 m planted landscape buffer where commercial uses directly abut residential uses. (see **Figure 3.4** for cross section details).

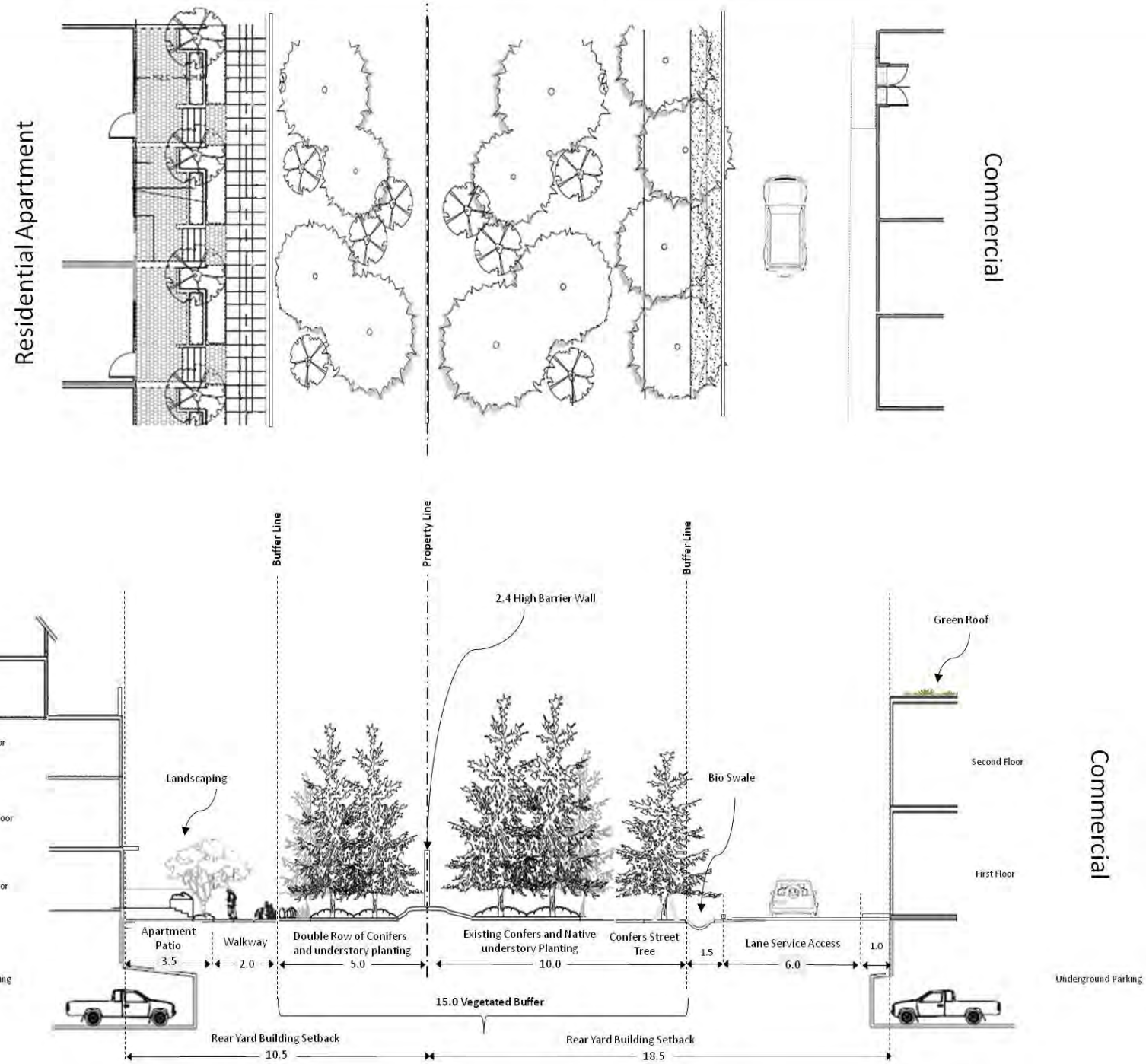


FIGURE 3.4
 Typical Landscape Buffer along a direct Commercial -Residential Apartment Interface

VII: Loading/Services and Utility Areas



- Enclose all utility equipment within buildings or screen it from both the public street and private properties to the rear and ensure that noise is managed. This includes utility boxes, garbage and recycling container storage, loading docks and ramps and air conditioner compressors.
- Share service and utility areas between different users within a single building or between different buildings, to maximize space efficiencies.
- Design garbage enclosures that are external to the building with the same materials as the building and ensure that the wall height is sufficient to completely conceal garbage dumpsters.
- Provide lighting that is appropriate to the ground floor use and focuses on pedestrian areas.
- Use efficient white light sources on site to reduce energy costs and to create a natural colour balance for safety and security.
- Design secondary doors, such as emergency exit doors, to blend in with the building façade.



3.5 INDUSTRIAL AND BUSINESS PARK AREAS

The Industrial and Business Park areas are located along the north side of the plan area. Close proximity to regional transportation routes such as Highway 1, Highway 15 and Golden Ears Way makes this area a desirable location for these types of uses.

The Light Industrial is bound by Highway 1, Highway 15, and Golden Ears Way, is referred to as the “triangle”. Access into the triangle is restricted because it is surrounded by regional transportation routes. As a result, the uses within the triangle are limited to Light Industrial. Stand alone retail; including large-format retail would not be supported within the triangle.

The Business Park designation is located to the south of Highway 1, outside of the “triangle” area. Since the access points to this designation are not limited, Business Park uses can be supported.

Business Park uses include Technology Park (high technology, science-based industries with significant research and development components), Office Development, Warehouses and Service Uses.

While Business Park designation allows light impact industrial, high-tech industrial, warehouse, office and service uses, these uses are to be carried out in enclosed buildings forming part of a comprehensively designed development. Office buildings are encouraged along 92 Avenue.

Landscaped buffer of 7.5 m wide will be required for sites adjacent to residential uses, and 3.5 metres along property lines that abut a local road.

Principle

- Create opportunities for residents to work close to home by accommodating business and industrial development in the Anniedale triangle and other industrial business park lands.

Light Industrial

The overall development concept for the Anniedale Industrial area located in the Anniedale-triangle envisions a high quality light-industrial park that reflects the natural characteristics inherent in its setting, and builds on and extends the existing road and servicing infrastructure found to the North. Land uses within the business park will emphasize high quality industrial uses including a mix of light manufacturing, distribution, warehouse, research and development, and similar uses.

Outdoor storage and display is not allowed under this designation. Both single tenant and multi-tenant buildings could be located on these lands. Green pedestrian and habitat connections to the detention pond and park area on 96 Avenue will be encouraged.



	LIGHT INDUSTRIAL
MINIMUM LANDSCAPED PERMEABLE SURFACES	Meet the requirements listed in Table 3.3–5 ; developers may choose from among a variety of LID measures to meet the requirements, some examples of which are provided in Table A.2 in Appendix C
MINIMUM LAND ASSEMBLY	May be Required. Refer to Land Consolidation Areas Part 4.0 of this document for more information.
DESIGN CONSIDERATIONS	Incorporate Sawmill and Lumber Theme. See also Placemaking & Identity Part 2.6
HERITAGE	Incorporation of Harbidge House into development. See Part 4.5 Heritage Area Guidelines
BUFFERING	Required along Highway and Residential Interfaces. Incorporate 7.5 m landscape buffer adjacent to Residential lands.
RIPARIAN AREAS	See Part 4.2 Environmental Management



Business Park Industrial

The Anniedale Business Park areas are located on the south side of Highway 1, to the east of 184 Street.

The Business Park designation provides for business parks consisting of office uses and service uses as well as warehouse and distribution uses that are comprehensively designed with extensive landscaping and high quality urban design.

Business park development may include multi-tenant complexes or freestanding single tenant buildings established in an attractive, clean and quiet campus setting. No outside storage is permitted.

Office uses are encouraged along 92nd Avenue.

	BUSINESS PARK
MINIMUM LANDSCAPED PERMEABLE SURFACES	Meet the requirements listed in Table 3.3–5; developers may choose from among a variety of LID measures to meet the requirements, some examples of which are provided in Table A.2 in Appendix C
MINIMUM LAND ASSEMBLY	May be Required. Refer to Land Consolidation Areas section of this document for more information.
DESIGN CONSIDERATIONS	Incorporate Sawmill and Lumber Theme. See also Part 2.6 Placemaking & Identity Office uses encouraged along 92 nd Avenue.
MINIMUM LAND ASSEMBLY	May be Required. Refer to Land Consolidation Areas Part 4.0 of this document for more information.
BUFFER	May be required. Incorporate 7.5 m landscape buffer adjacent to Residential lands.
RIPARIAN	See Part 4.2 Environmental Management

Design Guidelines for Industrial and Business Park Areas:

In addition to the OCP Guidelines, the following apply to Industrial and Business Park developments:

I: Context and Neighbourhood Character

Views

The northern plan area offers significant views to the Golden Ears Mountain Ranges.

- Development needs to consider public view corridors to the north.

History & Heritage

- Sawmills and the lumber industry were prevalent in the late 1860's. The future building form and character should draw on this theme when redevelopment of the site occurs.
- There are a number of historic buildings in the plan area. Through a Heritage Register evaluation process, the Harbidge House (17633 96 Avenue) is one of the sites that has been determined to have recognizable heritage significance and has been recommended to be added to the Heritage Register.
 - Development on the Harbidge House site should not occur until the protection and restoration of the building is secured in a manner satisfactory to the City (e.g., heritage revitalization agreement).
 - This building is intended to remain in private ownership with an adaptive use that respects the heritage value and encourages a viable future.

II: Site Design

- On corner sites, the principal building shall be anchored at the corner and be designed to be visually attractive from both abutting streets.
- Clear pedestrian paths to and from building entrances shall be provided.
- On-site walkways should be linked to the public sidewalks by well defined paths to minimize conflict with vehicular traffic.
- Landscaped buffer of 7.5 m wide will be required for sites adjacent to residential uses, and 3.5 metres along property lines that abut a local road.





- Site planning and building design should make the provision for interesting outdoor urban spaces.

Business Park

- Office uses are encouraged along 92nd Avenue,
- Strong architectural edges will be created along 92 Avenue and 188 Street, by providing minimum building street setbacks in combination with rear and side yard parking.

Site Access

- Common easements for shared entrances and access between lots may be required for lots fronting arterial roads.
- Drop curb openings must not be located within 3.5 metres of the side property line, except in a shared access arrangement. City of Surrey driveway access standards are 9 metres from an intersection on a local road, 25 metres on a collector road, and 50 metres on an arterial road. Additional separation may be required on a site specific basis.
- The transportation objective is to minimize access along 92 Avenue & 188 Street corridors. However, a minimum 50-metre interval between driveways may be considered.
- A single point of entry to individual sites is preferred. Where high volume heavy truck access is required, provisions may be made for a separate service entry point, provided it is clearly identified as such and is separated from visitor / on-site parking area subject to review and approval of the City of Surrey Engineering Department.



Exterior Lighting

- Lighting along pedestrian pathways is required and should not exceed 4 metres (13 ft.) in height.
- Fixtures and poles should be in a colour that compliments the building architecture and parking lot lighting.
- Lighting should be directed away from residential areas.

Signage

- The design of the signs should relate to the architectural character of the buildings on the same site.
- Free-standing signs should be integrated into the site landscaping.
- Single pole free-standing pylon signs are not permitted.





- Facia signs facing the street may be permitted provided they are integrated and coordinated with the architecture of the building and overall design of the development.

III: Public Realm and Street Interface



- Buildings along streets should be designed to include glazing and high quality finishing materials,
- High quality landscaped frontage is required along public streets,
- Install street trees within boulevards at 7 to 10 metres on centre, with minor variations to suit entry driveways and site servicing. Street trees will be planted with an initial planting trunk diameter of not less than 5 centimetres measured 1.4 metres above finished ground. Tree selection and spacing is subject to final determination by the City of Surrey, Parks, Recreation and Culture Department.
- Provide landscaping and trees within the centre medians of 96 Avenue and 188 street,
- Blank walls facing streets are generally not permitted. Where they are unavoidable, substantial landscaping should be used to mitigate their visual impact.
- Parking within front yard setback is generally discouraged. However, where it is proposed, it must be visually screened from the street by a combination of berming and high quality landscaping.



IV: Building Form and Character



- To reinforce the Sawmill and Lumber Theme, the use of the following is encouraged: the use of wood and heavy timber construction, sawmill paraphernalia such as saw blades and metal tools, repetition of logs, tree rings.
- Variations in massing and changes in height and horizontal planes are encouraged, Long and non-articulated buildings should be avoided.
- The main entrance to each building should be easily recognizable from the street.
- All exterior mechanical units or equipment including roof top units that may be visible from the streets should be enclosed.

V: Loading and Service Areas

- Along 188 Street and 92 Avenue, loading areas are not permitted in the area between the building and the street. Where a loading area is permitted to face a street, overhead service doors must be integrated into the overall building design,
- Locate service garbage and recycling areas behind buildings or on the sides of buildings if the site is not visible from a street,
- Loading areas shall be screened by buildings, a landscape screen, a solid decorative fence, or a combination thereof.



3.6 INSTITUTIONAL AREAS

Sites for public institutional uses such as Elementary schools and the Community Centre have been identified on the Land use Concept. Private Schools, Assembly Halls and other such institutional uses have not been specifically located. Rather, general, criteria for such uses are as follows:

- Uses may be considered in High Density Residential Areas, Commercial Designations, and portions of areas designated for Business Park;
- Daycares would be suitable in residential areas, as well as areas in close proximity to schools
- Locate institutional uses:
 - along transit routes
 - on arterial or collector roads when possible
 - close to commercial nodes
- Include public amenities such as benches and seating, plaza areas, public art as part of the development where appropriate.





Design Guidelines for School Areas:

- School buildings should be located close to the public street with main entrances visible from the street.
- Where practical, gathering or plaza areas should be included in front of the main entrance of the school.
- Parking areas are discouraged from being located in front of the school building.
- School elevations should be designed with a high level of architectural character and materials.
- Bus drop-off areas should be located away from the main entrance of the school, preferably at the side of the building to avoid conflict with other vehicles.
- Bus drop-off areas for elementary school may also be located on local streets, where appropriate.
- Pedestrian connections should be provided from sidewalks, parking areas, and bus loading areas to school buildings.
- Lighting for school buildings and parking areas should be directed away from adjacent properties.
- Service areas should be screened from public view.
- Signage should be integrated into the landscape treatments or building architecture.
- Where possible, utility elements and equipment should be located away from publicly exposed views, and are discouraged from being located in the front yard or flankage yard of a corner lot. Where utilities are required to be located in the front or flankage yards, the utilities should be located in a discreet area or screened from public view through landscaping or other screening mechanisms.



3.7 PARKS RECREATION AND TRAILS

Parks

The NCP area is comprised of approximately 79.7 hectares (197 acres) of active, passive, forested and riparian park area that serve the local populations need for active park space while retaining significant and valuable environmental features.

This includes one main Community Park, seven active and passive Neighbourhood Parks, riparian parkland and forested areas all connected by a network of greenways and trails. The parks are located so that they incorporate the protection of significant ecosystems and are designed so that they are accessible by residents of all ages and abilities.

The amount of parkland in the NCP is determined by following the guidelines of the Parks, Recreation and Culture Strategic Plan. It calls for an average of 4.2 hectares per 1000 people of active and passive parkland. This is in addition to environmentally sensitive areas that are acquired for their intrinsic value as natural areas.



Principle 1

- Retain significant environmental features including creeks, important vegetation and Green Infrastructure (Ecosystem Hubs, Sites and Corridors):
 - i. Consider Park locations which incorporate protection of significant and/or valuable ecosystems;
 - ii. Minimize clear cutting vegetation and clearing lands during development and encourage the planting and replanting of trees;
 - iii. Encourage cluster development which enables density transference and site specific design that responds to the area's natural features

Principle 2

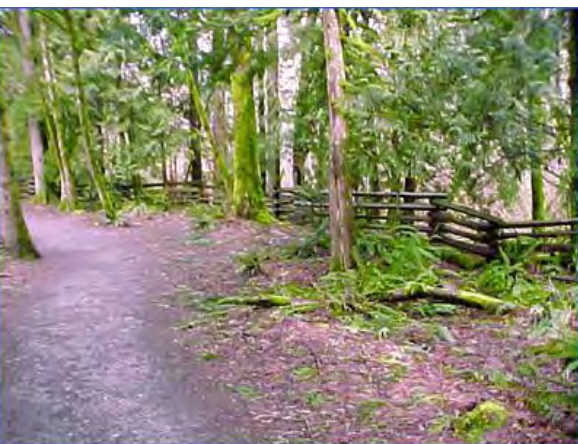
- Create parks and recreation opportunities that are interconnected, both active and passive, which are accessible by residents of all ages and abilities on foot or by bicycle.



In the NCP area, there is one large Community Park. It will be located at the south-west of corner 184th Street and 92nd Avenue and be just over 14 hectares (35 acres) in size. It is likely to include soccer and baseball fields, a water park playground, washrooms and passive lawn areas with paths throughout. It protects and maintains the natural beauty of the area by offering fantastic views into the agricultural lands and is connected by the main Lakiotis Greenway running east-west through the NCP area. The final plan for the park will be subject to community consultation and detailed planning.



There are several smaller neighbourhood parks in the NCP. As a focal point of each neighbourhood, they provide a local gathering and recreational space for nearby residents. They are of varying sizes but generally located in the centre of each neighbourhood within approximately a 10 minute walking distance for most residents. Each neighbourhood park will incorporate a variety of active recreational opportunities such as children's play areas, sports boxes, dog off-leash areas, disc golf courses, pedestrian walkways and seating areas as well as areas for passive recreation. The programming of each park is to be determined through consultation with future residents.



There are also several areas in the NCP that are protected for their value as natural areas. The park site at 180th Street and 93A Avenue in particular is a highly sensitive wetland area and the adjacent cluster developments shall ensure the functionality and performance of the park land is undisturbed and/or improved. These include the headwaters of the Serpentine River, other riparian areas, wetland and forested lands. These lands are highly valuable as habitat for amphibians, numerous birds, mammals and fish species as identified by the 2011 Ecosystem Management Study and the 2009 Anniedale-Tynehead Madrone Environmental Study.

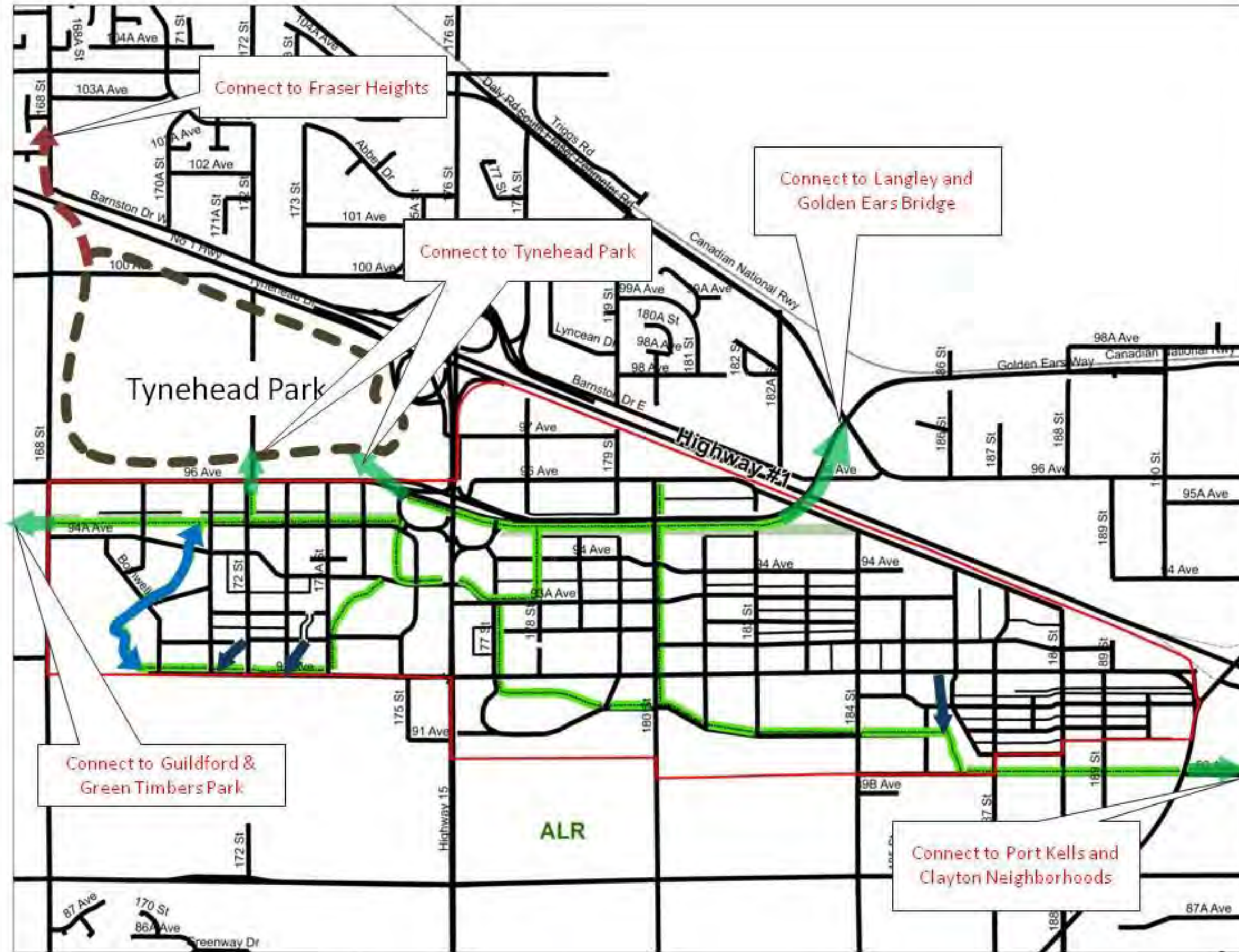


Trails

The multi-use trails are a fundamental component of the Anniedale-Tynehead Community. The NCP is comprised of five main trails connecting the parks, major points of interest and adjacent destinations outside the NCP (see **Figure 3.5**). The trails in this NCP range from urban paths to forested areas and gravel trails adjacent to the headwaters of the Serpentine River. They are designed to accommodate and be accessible by residents of all ages and abilities.

There are two main trails running east-west through NCP. The first comes from the west and is the continuation of the Green Timbers Greenway that originates in City Centre. It connects across 176th to the existing Golden Ears Greenway creating a continuous connection from Langley to the City Centre. It travels primarily along the BC Hydro right of way and runs adjacent to parkland commercial and residential areas. The second east-west trail, the Lakiotis Ridge Trail, runs along the Serpentine River headwaters south to the ALR buffer. It heads west to a neighbourhood park before crossing 176th Street and heading back down along the ridge line. Here it offers great views into the ALR before connecting with the large Community Park. It continues east connecting to the Port Kells community and beyond.

Running north-south there are several connecting trails that link neighbourhood parks, commercial areas, schools, residential areas and the recreation centre. These connections also link to Tynehead Regional Park where a new overpass connects across Highway 1 to the community of Fraser Heights.



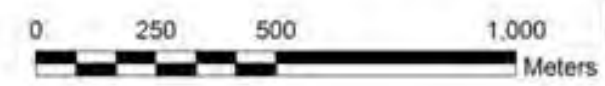
Legend

-  Metro Vancouver Greenway
-  Tynehead Overpass
-  Riparian Path/Trail
-  Streamside Path/Trail
-  City Greenway

Anniedale-Tynehead NCP
Greenways Network

Figure 3.5

The accuracy and completeness of information shown on this drawing is not guaranteed. It will be the responsibility of the user of the information shown on this drawing to locate and establish the precise location of all existing information, whether shown or not.

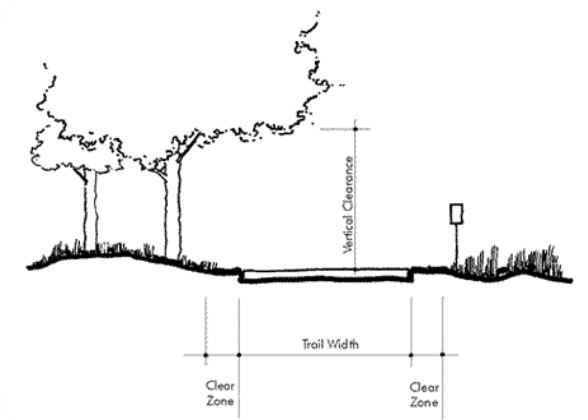
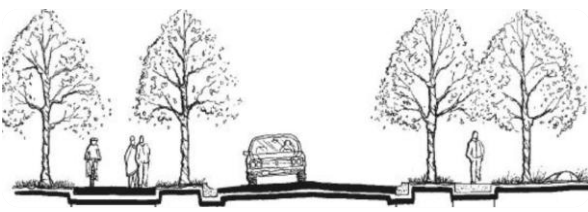


Design Guidelines for Parks and Trail Areas:

Detailed design will be completed in consultation with the future community, however common design features for each park include:

- Trails, and pedestrian/cycling connections to other neighbourhood amenities and greenways;
- Circuit trails around the park's perimeter, wherever feasible;
- Active areas such as playgrounds or sitting areas located in highly visible locations, either near entrances to the park or along the perimeter of the park, visible from surrounding streets;
- Tree plantings that emphasize a strong vegetated edge surrounding an open interior space, while permitting views into the park from surrounding streets and homes.
- Where residential units are adjacent to parkland and/or linear greenways there should be low fences, with active rooms facing the public space to create 'eyes on the park';
- Where multi-family developments front onto parkland, the connecting path to front doors must be on private property.
- Playgrounds will be located within 400 meters, or a 10 minute walk from all residential areas.
- Pedestrian connections should be provided to sidewalks and other pedestrian walkways.
- Neighbourhood parks should be exposed to local streets to provide good visibility and accessibility.
- Crime Prevention through Environmental Design (CPTED) will be considered in the design of the park.
- Neighbourhood parks may be used as part of, or associated with the function of the rainwater management system but areas for storm water management must be clearly defined and effectively separated from active parkland uses.



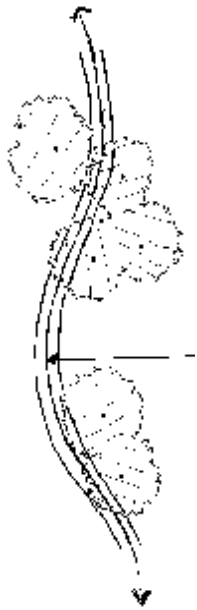


Trail Design Guidelines:

- Where trails are planned adjacent to multi-family development, the trail should be built by the developer on private property with a SROW for public passage and maintained by the strata. The path should look and feel like a public space.
- Where trails are planned fronting single family developments, the trail should be built by the developer as part of the road frontage construction.
- Pedestrian and multi-use pathways and bicycle facilities are provided within the Anniedale-Tynehead Community and linked to the City-wide trail network and follow the City's trail standards.
- Pathways should be included mid-block along long residential streets to provide convenient pedestrian access.
- Pedestrian pathways and bicycle facilities should be accessible to a range of users.
- Amenities, such as seating, lighting, signage, and garbage and recycling containers should be provided along the trails.
- Pathways will be designed to reduce the negative impacts on open space and natural features and habitats.
- Pathways should incorporate public art where possible.
- Pathways should incorporate wayfinding as per City standards or allow for future wayfinding to be installed.

Hydro and Gas Transmission Corridors:

- Pedestrian walkways and recreational pathways should be provided within the hydro transmission and gas corridors, where possible, and integrated into the community trail network. Plans are to be submitted to BC Hydro and/or Fortis



Meander Trail
within Utility
Corridors

for review and comment.

- Pedestrian and multi-use pathways shall be carefully located to avoid the potential for adverse impacts on existing natural features and habitats within the Transmission corridors. Pathways should not be constructed in between the poles and guy wires/anchors.
- Parking and roads may be provided within the hydro transmission corridors for commercial, and transportation uses located adjacent to the Corridor.
- Parking located within the hydro transmission corridor should be visually screened from the public streets and pedestrian pathways through the use of landscape treatments.
- **See Part 9** for Utility Agency Comments for Utility Corridors





3.8 PUBLIC REALM FURNISHINGS

Street furnishings for the Anniedale-Tynehead NCP area will incorporate the lumber and sawmill industrial theme in a contemporary way. Use of natural wood material combined with industrial metal materials will reinforce the history in a contemporary way.

The following are examples of the type of public realm furnishings that should be used in developments that require these components:

Overall Materials

- Wood, timber, tree rings
- Metal Finishes: Silver metal & metal grey
- Concrete

Benches

- Contemporary wood with grey metal finishes

Lighting

- Contemporary style, grey metal

Waste Receptacles

- Grey metal, simple contemporary design

Paving

- Rectilinear pattern
- Sawcut concrete joints
- Granite feature strips
- Large size stone or concrete pavers



An aerial photograph of a residential area. The image shows several houses with varying roof colors (grey, brown, white) and styles. There are large green lawns, many trees, and a paved road running vertically through the center. The overall scene is a mix of developed and wooded areas.

PART 4

DEVELOPMENT GUIDELINES

4.0 Land Consolidation Guidelines
4.2 Environmental Management
4.4 Cluster Housing Guidelines

4.1 Agricultural Edge Guidelines
4.3 Green Space Area Guidelines
4.5 Heritage Area Guidelines

PART 4: DEVELOPMENT GUIDELINES

4.0 LAND CONSOLIDATION GUIDELINES

Land consolidation areas have been identified to advise future developers of consolidation requirements and to ensure feasible development areas which achieve an equitable distribution of road dedication, land development, and construction costs. Land consolidation may be required for:

- small acreage parcels;
- irregular shaped lots;
- encumbered properties with little development potential;
- cluster designation areas;
- sharing road construction costs;

Within the plan area there are a number of smaller acreage parcels and irregular shaped lots including several areas where lot consolidation is required in order to develop. These land consolidation opportunities can often be determined on a case-by-case basis at development application stage. In some cases, however, pre-determined consolidation requirements are identified in the Land Use Plan in order to avoid creating remnant pieces that could not develop on their own. These particular properties should be developed together through consolidation and land assemblies or through coordinated development.

Land consolidation areas also allow for a more equitable distribution of road dedication and construction costs amongst properties.

If land consolidation is not possible during the development process, the developer must:

- Demonstrate that the development potential of the excluded property is not compromised; and
- Share road construction costs amongst properties shown in the land consolidation area.

Consolidation areas are identified in **Table 4.0**, and shown in **Figure 4.0**; but not shown for Large Format retail areas which will also require lot consolidation on a site specific basis.



TABLE 4.0 - ANNIEDALE-TYNEHEAD NCP – LAND CONSOLIDATION AREAS

Parcel Information			Consolidation Objective(s)							Specific Site Considerations	
*Consolidation (Figure 4.0) Area	# of Parcels	Total Area (Ha)	Small Acreage Parcel(s)	Irregular Shaped Lots	Encumbered Property	Cluster Housing	Sharing Road Costs	Limited Road Access	Park		Works & Services Sharing
1	12	4.28	Y				Y			Y	Works and Services for Construction of 97 Avenue. Small lots Consolidated for Equitable Road Construction Costs.
2	5	2.23								Y	
3	3	1.94								Y	
4	3	1.38								Y	
5	3	1.55								Y	
6	5	1.82						Y		Y	
7	3	1.62	Y		Y				Y	Y	Maximize Density.
8	2	1.03								Y	
9	2	1.50						Y		Y	
10	2	1.53								Y	
11	2	1.62					Y	Y		Y	Arterial and Collector
12	3	2.86						Y		Y	Access from 180 Street
13	3	1.94								Y	Access from 182 Street
14	2	1.50		Y	Y					Y	
15	2	0.84			Y				Y		Multiuse Pathway in Hydro Corridor
16	3	1.25			Y		Y		Y		Road widening, and Small Lots
17	2	0.85								Y	
18	3	1.65			Y		Y	Y		Y	
19	2	2.15								Y	Statutory Right of Way, Works
20	2	6.00				Y					Tree and natural area preservation
21	2	4.49			Y	Y					Natural and Riparian Area Preservation
22	5	2.66	Y			Y	Y			Y	Tree and natural area preservation. Road construction and Access
23	2	1.62					Y			Y	Three road Frontages
24	6	2.81					Y			Y	Paired Lots, Double Frontage
25	4	1.85					Y			Y	
26	2	4.06				Y	Y			Y	Tree and natural area preservation.
27	2	4.06				Y	Y			Y	Tree and natural area preservation.
28	3	3.59					Y				
29	2	0.96					Y				Collector Road. Industrial Service Road
30	3	3.72			Y	Y					Riparian / Flood Plain Protection
31	2	4.75			Y	Y					Riparian / Flood Plain Protection
32	2	4.12				Y					Riparian / Flood Plain Protection
33	2	2.05				Y				Y	Riparian / Flood Plain Protection
34	3	1.62					Y				Construction of Road Frontage along 172 Street
35	2	1.87			Y	Y					Riparian Protection
36	4	3.83				Y	Y		Y	Y	Tree and natural area protection, and collector Road construction.
37	4	2.05					Y	Y			

Parcel Information			Consolidation Objective(s)								Specific Site Considerations
*Consolidation (Figure 4.0) Area	# of Parcels	Total Area (Ha)	Small Acreage Parcel(s)	Irregular Shaped Lots	Encumbered Property	Cluster Housing	Sharing Road Costs	Limited Road Access	Park	Works & Services Sharing	
38	2	2.02				Y	Y			Y	Ag Buffer / Density Transfer / 92 Ave
39	3	1.62			Y	Y	Y			Y	Ag Buffer / Density Transfer / 92 Ave / Riparian Protection
40	3	1.84				Y	Y			Y	Ag Buffer / Density Transfer / 92 Ave
41	2	2.02			Y	Y	Y			Y	Ag Buffer / Density Transfer / 92 Ave / Riparian Protection
42	4	3.43					Y			Y	Ag Buffer / School Site / Shared Road Costs
43	2	1.73				Y	Y				Ag Buffer / Tree Protection / Road Access
44	3	3.18				Y	Y			Y	Ag Buffer / Tree Protection / Road Cost
45	4	1.37						Y			
46	3	1.23					Y	Y			
47	4	1.64					Y	Y			
48	3	1.22					Y	Y			
49	2	1.98	Y				Y				
50	3	5.73	Y		Y	Y	Y				Tree Protection / Riparian Areas / Soils
51	3	3.68	Y				Y				
52	4	1.80					Y				Arterial and Collector Roads
53	3	1.53					Y	Y			
54	5	2.00					Y	Y		Y	Industrial Service Road (Collector)
55	5	6.07				Y	Y	Y		Y	Density Transfer for Ag Buffer / Tree Protection / Steep Slopes / Access
56	3	6.29				Y	Y	Y		Y	Density Transfer for Ag Buffer / Tree Protection / Steep Slopes / Access
57	2	5.95				Y	Y	Y		Y	Density Transfer for Ag Buffer / Tree Protection / Steep Slopes / Riparian
58	2	6.04				Y	Y	Y		Y	Density Transfer for Ag Buffer / Tree Protection / Steep Slopes / Riparian
59	2	4.99				Y	Y	Y		Y	Density Transfer for Ag Buffer / Tree Protection / Steep Slopes
60	2	4.44				Y	Y	Y		Y	Density Transfer for Ag Buffer / Tree Protection / Steep Slopes
61	3	6.06				Y	Y	Y		Y	Density Transfer for Ag Buffer / Tree Protection / Steep Slopes / Riparian
62	2	0.86			Y	Y	Y				Riparian Area / Tree Protection / Access
63	2	1.29			Y	Y	Y				Special Road / Riparian Area / Tree Protection
64	3	1.62					Y				
65	2	4.05					Y	Y		Y	School Site Access
66	3	2.00	Y				Y			Y	
67	2	4.04				Y	Y				Road Costs
68	2	0.81					Y			Y	
69	2	0.81					Y			Y	
70	3	1.66					Y			Y	



Legend

-  AnnedaleTyneheadStudyArea
-  Land Consolidation Areas

Annedale-Tynehead NCP

Lot Consolidation
Strategy

The accuracy and completeness of information shown on this drawing is not guaranteed. It will be the responsibility of the user of the information shown on this drawing to locate and establish the precise location of all existing information, whether shown or not.

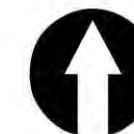
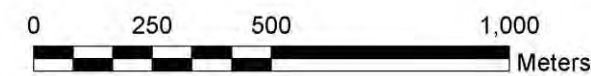


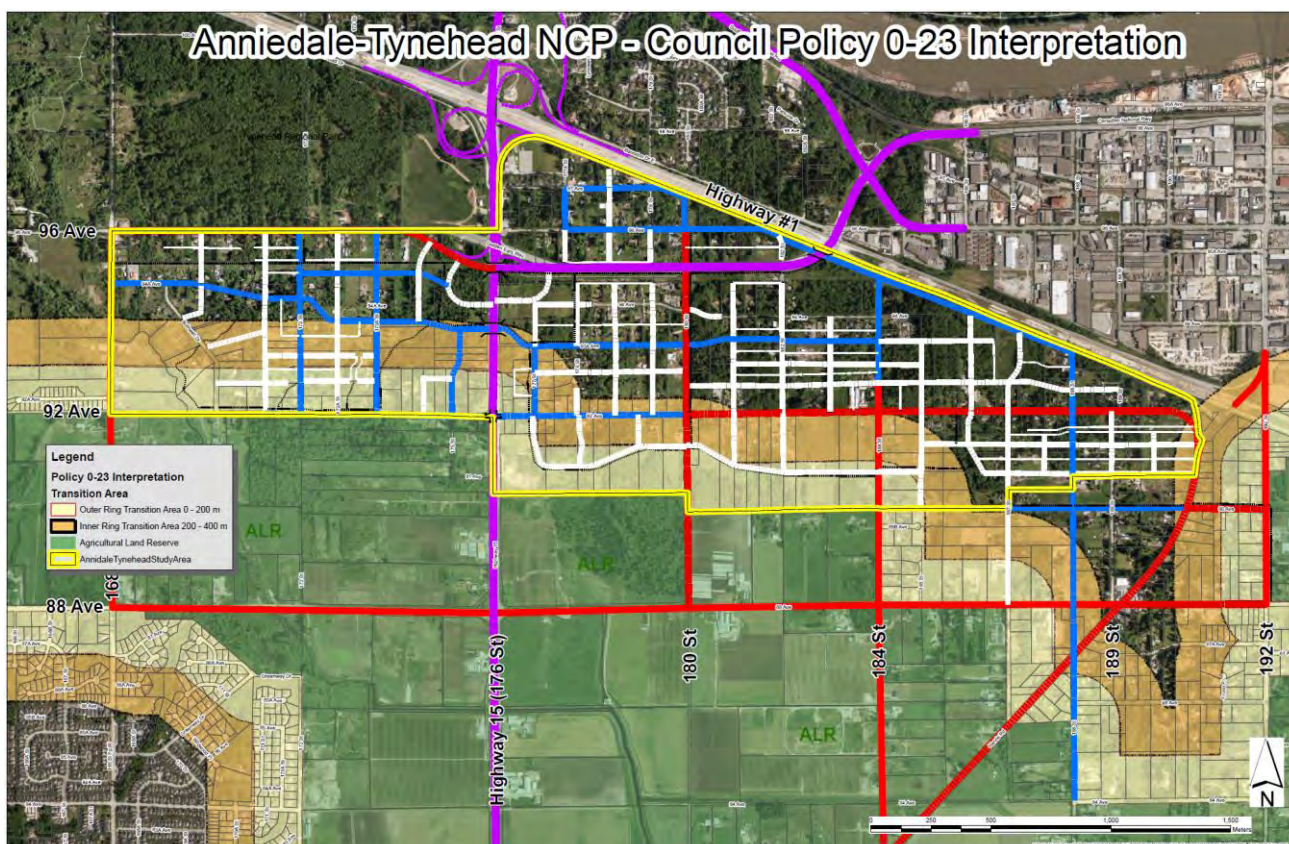
Figure 4.0

4.1 AGRICULTURAL EDGE GUIDELINES

The City of Surrey's Official Community Plan (OCP), designates a development permit area (DPA) for "the protection of farming" to improve land use compatibility, containing regulations and policies for screening, landscaping, fencing and siting of buildings or structures near the Agricultural Land Reserve (ALR). These regulations provide for buffering or separation of development from farming areas.

City Policy number O-23, "Residential Buffering Adjacent to the ALR/Agricultural Boundary", identifies a typical transition area and provides for base densities of 1-2 units per acre within the Outer Ring Transition Area of 200 metres from the ALR boundary and densities of approximately 4 units per acre within the Inner Ring Transition Area of at least 400 metres of the ALR boundary as identified below; however, densities have been bonused to 4-6 units per acre cluster for areas in Tynehead transition area along 92 avenue, and 10-15 units per acre cluster below 92 avenue in Anniedale for future extended green space amenities and larger landscape buffers.

Given the specific topographical conditions and configuration of this part of the NCP, densities are proposed to be increase proportionally with ALR buffering and increased green space preservation requirements (40-50%) in these areas. This change in elevation between the proposed urban properties and the ALR creates a natural physical separation between the two areas. As a result the net densities were increased somewhat for long properties extending from the ALR above the ridgeline.



Urban-Agricultural Edge Development Guidelines

Objective:

Different Urban-ALR interface conditions require specific design solutions in order to mitigate potential for edge conflicts between farm and non-farm uses. Several buffer areas within the Plan are shown in **Figure 4.1**. The buffer requirements in these areas are based on Surrey's Official Community Plan Specifications, as well as landscape buffer types developed by the Agricultural Land Commission and Ministry of Agriculture, published as the Landscaped Buffer and Edge Planning Specifications, but modified to fit the specific land use and site conditions in the Anniedale-Tynehead NCP area.

Application

Prior to beginning a subdivision or development on lands adjoining the ALR or separated by a right-of-way, a statutory right-of-way or a dedicated road, the owner must:

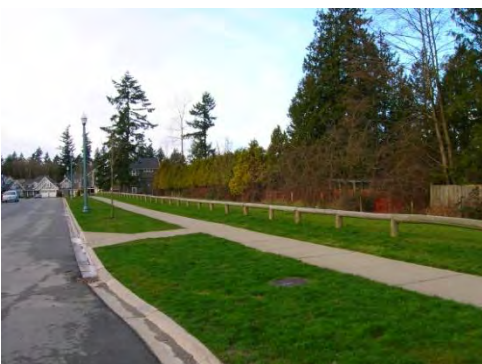
1. Obtain a development permit in accordance with the Surrey's Agricultural Development Permit Area (DPA) Guidelines.
2. Include an assessment of the site, substantiate the need for a buffer and provide design measures that are most appropriate for the site, considering the type and intensity of the urban use and its relationship to farm uses.
3. Provide a plan to the Surrey Agriculture and Food Security Advisory Committee (AFSAC) regarding agricultural viability, issues, and plans to mitigate potential conflict between farm and non-farm uses near the ALR Boundary related to the specific development application.

General Development Guidelines

1. Retain and enhance natural buffer features along the urban side of the ALR boundary (eg. Riparian areas, Ravines, treed areas, steep slopes >15%, wetlands, floodplain areas and high value vegetation through means such as cluster housing and parkland dedication.
2. Where natural buffers are not identified or feasible, create buffers and/or compatible uses on the urban side of the ALR boundary (eg. Roads, railways, hydro right-of-ways, berms, fences, open space and rain-water management facilities and features.



3. Where appropriate, and where it is unlikely to create conflicts with farming; consider incorporating passive recreation such as parks, and trails into the landscape buffer. With this approach the depth of the buffers should be increased to a minimum 20 meters in width.



Subdivision and Building Design

Buildings and structures may not be built within buffer areas;

- Road endings and road frontages next to the ALR should be avoided except as may be needed for access by farm vehicles.
- Subdivision layout and construction should minimize erosion,
- Maintain ground water quality and levels through adequate rain-water management, both during and after construction.
- Residential and institutional building construction will include triple paned windows within 300 m of the Agricultural Land Reserve.
- Consider Clustering buildings and structures away from the ALR to provide larger continuous landscape buffers in return proportional density transfer.

Buffer Width and Building Setbacks

See **Table 4.1** for detailed minimum Buffer width and Building Setback Requirements for specific special buffer areas identified in **Figure 4.1**. If not otherwise indicated in **Table 4.1**, the minimum separation distance between Residential and Institutional uses and the ALR boundary shall be as indicated in the Land Use Plan in the Cluster Residential Areas as Green Space Transfer Areas, but in no case should the building setback be less than a be 37.5 m and the buffer width be less than 30 m.

Buffer Design

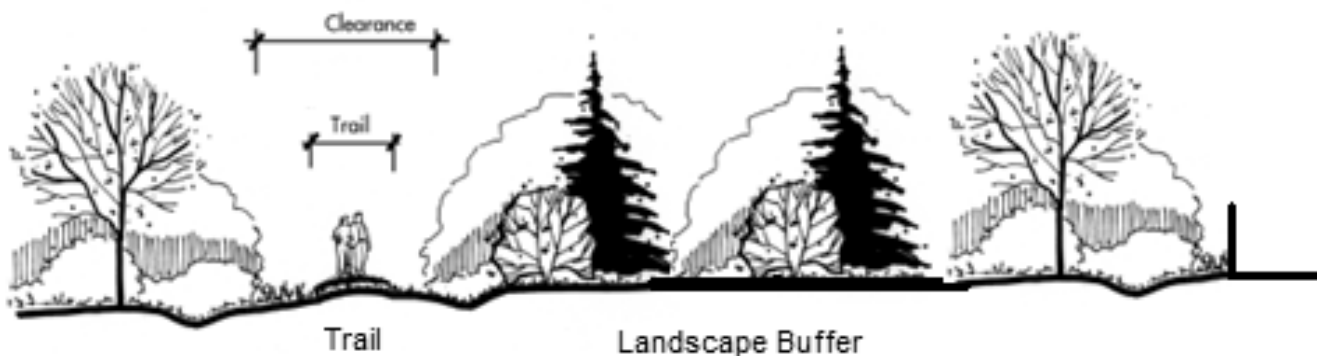
- The buffer design type that is appropriate at each development site will be determined on a case-by-case basis, based on each site's interface conditions. In general however Landscape Buffers should:
 - Be designed for mature height of a minimum 6 m and a minimum crown density of approximately 60% and contain a minimum of 60% native conifers to collect dust and/or spray drift.;

- Contain a majority of the plant material that is low maintenance, indigenous vegetation that can survive with little or no fertilizers.
- Buffer planning and layout will follow Schedule A of the MOA Edge Planning Guide:
 - No gaps in buffer, about 50% of screen is air space;
 - Fence design will follow Schedule D of ALC Landscape Buffer Specifications;
 - Plant material may be selected from lists in Schedules C of the MOA Edge Planning Guide;
 - Wherever feasible buffer is installed prior to commencing building construction;
 - Buffer maintenance plan developed and signed off by a registered landscape architect or professional biologist and the developer must provide security for at least 5 years to maintain the planting.
- A Section 219 covenant and appropriate financial security agreements are required to maintain the buffer on private lands until trees and plants are free growing (Minimum 5 Years);
- Rain water management facilities and features such as Detention ponds, ditches, swales and other similar elements must be designed and approved by an appropriately qualified professional.



Recreation and Trail Design

- Where walkways or bikeways form part of the landscape buffer, they may occupy no more than one fifth of the buffer width or no more than 4 meters, and must be located a minimum 16 meters away from the edge of the agricultural land to not reduce the effectiveness and primary purpose of the landscape buffer.

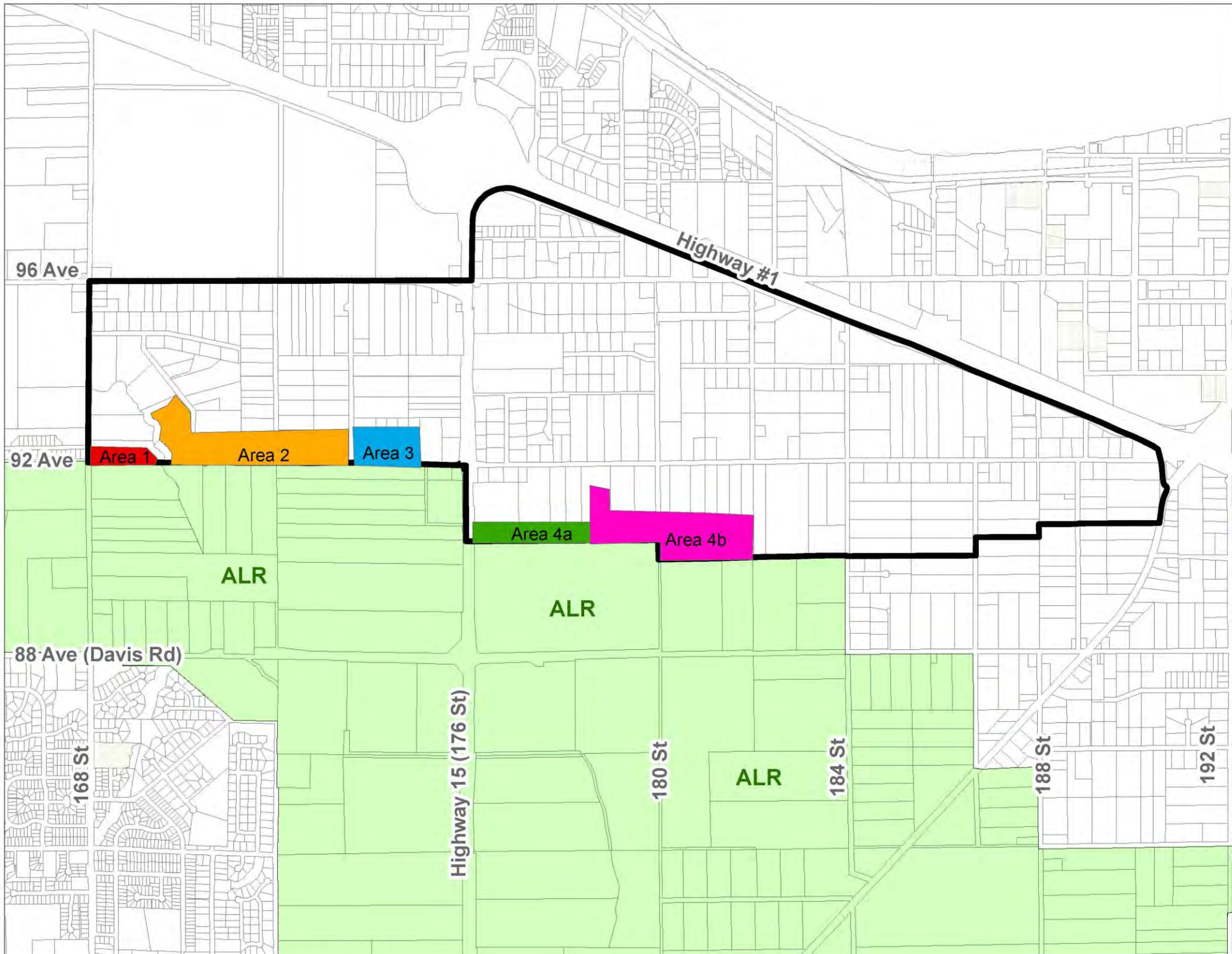


Communication



- Register a Covenant on property titles within 300 m of the ALR to inform potential home purchaser that farm operations are in the area and that farm practices such as noise, odour and dust should be expected during certain times of the year as part of acceptable farm practices.
- Develop subdivision agreement as part of development approval requiring the Registering of a Restrictive Covenant on lots adjacent to ALR to advise of Agricultural practices and “Right-to-Farm Act” legislation: “The develop agrees to advise the purchaser, and future tenants, that noise, dust and odour associated with nearby farm operations my occasionally affect some activities of dwelling occupants”.
- In addition to disclosure statements, consider using signage along the ALR boundary that informs residents and prospective purchasers of the proximity of farm operations within the immediate area and the possible activities associated with farm operations: “You are next to an active farming area. This buffer has been planted for the benefit of both you and our farmers. The buffer helps to:
 - lessen the impacts from farming activities;
 - protect farmers’ property from trespass & litter; and
 - provide wildlife with a source of food & shelter.



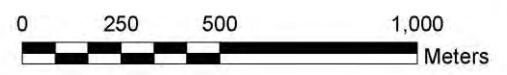


- Legend**
- AnniedaleTyneheadStudyArea
 - Agricultural Land Reserve
 - Area 1: Suburban Lands Adjacent to Serpentine (Tynehead)
 - Area 2: Residential Lands North of 92 Avenue (Tynehead)
 - Area 3: School Site North of 92 Avenue (Tynehead)
 - Area 4a: Residential Lands South of 92 Avenue (Anniedale)
 - Area 4b: Residential Lands South of 92 Avenue (Anniedale)

Anniedale-Tynehead NCP
Area Specific Urban-Agricultural Edge
Development Guideline Locations

Figure 4.1

The accuracy and completeness of information shown on this drawing is not guaranteed. It will be the responsibility of the user of the information shown on this drawing to locate and establish the precise location of all existing information, whether shown or not.



V:\Policy&Long V\Policy&Long Range\GIS_ANALYSIS\ANNIEDALE_TYNEHEAD_NCP\Anniedale_Tynehead_NCP_OptionC_2010\Projects\Anniedale Tynehead Green Space - OPTION C Revised 3 Oct. 2011



AREA SPECIFIC URBAN-AGRICULTURAL EDGE: DEVELOPMENT GUIDELINES

SITE LOCATION	MINIMUM BUILDING SETBACK	MINIMUM BUFFER WIDTH	BUFFER DESIGN / OWNERSHIP	ROAD INTERFACE DESIGN	RESIDENTIAL DENSITY
Area 1: Suburban Lands Adjacent to Serpentine (Tynehead)	<ul style="list-style-type: none"> Minimum Residential Building Setback 37.5 m from ALR Boundary <p><i>See Design Cross Section Figure 4.2s</i></p>	<ul style="list-style-type: none"> 10 m planted unopened ROW along ALR Boundary 6 m planted landscape forming part of 16 m local Road (92 Avenue). 	<ul style="list-style-type: none"> Landscape Buffer component planted according to MOA – Agricultural Edge Planting Guidelines. Landscape Buffer Component within existing and future City owned Road Right-of-way. 	<ul style="list-style-type: none"> 10 m unopened Road ROW 16 m Local Road with Rural Cross section adjacent to ALR with Ditch or drainage swale and 7.5 m vegetated buffer designated as parkland. 	<ul style="list-style-type: none"> Suburban Cluster 2 UPA
Area 2: Residential Lands North of 92 Avenue (Tynehead)	<ul style="list-style-type: none"> Minimum Residential Building Setback 53.5 m from ALR Boundary <p><i>See Design Cross Section Figure 4.3</i></p>	<ul style="list-style-type: none"> 21 m 92 Avenue Collector Road ROW adjacent to ALR 7.5 m Planted Landscape Buffer adjacent to 92 Avenue ROW (Parkland) 20 m Green Open Space Area adjacent to 7.5 Landscape Buffer (Parkland) 	<ul style="list-style-type: none"> 7.5 m Landscape Buffer component planted according to MOA - Agricultural Edge Planting Guidelines. Inside 20 m of buffer area in Green Space Transfer Location may be used for Passive Recreational activities such as walkways, parks and/or garden as part of City Linear Park System. Green Open space could be designed with water retention capacity or adequate rainwater management systems. 	<ul style="list-style-type: none"> 21 m Collector Road with Rural Cross section adjacent to ALR with Ditch or drainage swale. Consider a 4 m wide Greenway and additional street trees in Road-Right-of-way forming part of buffer. 	<ul style="list-style-type: none"> Low Density Cluster 4-6 UPA Locate highest density units away from ALR edge.
Area 3: School Site North of 92 Avenue (Tynehead)	<ul style="list-style-type: none"> Minimum School Building Setback 37.5 m from ALR Boundary 	<ul style="list-style-type: none"> 21 m 92 Avenue Road ROW 92 adjacent to ALR; 7.5 m Planted Landscape Buffer adjacent to 92 Avenue ROW 	<ul style="list-style-type: none"> Landscape Buffer component planted according to MOA – Agricultural Edge Planting Guidelines. Buffer planted and maintained by School District. 	<ul style="list-style-type: none"> 21 m Collector Road with Rural Cross section adjacent to ALR with Ditch or drainage swale. Consider a 4 m wide Greenway and additional street trees in Road-Right-of-way forming part of buffer. 	<ul style="list-style-type: none"> N/A
Area 4a: Residential Lands South of 92 Avenue (Anniedale)	<ul style="list-style-type: none"> Minimum Residential Building Setback 37.5 m from ALR Boundary <p><i>See Design Cross Sections Figure 4.4 and 4.5</i></p>	<ul style="list-style-type: none"> 30 m Planted and/or Natural Landscape Buffer (Parkland) 	<ul style="list-style-type: none"> Buffer provided as Parkland and provided as Green Space through (Density Transfer). Cost allocation for Park Maintenance securities and ensure capital funds for Buffer installation and maintenance. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> High Density Cluster 10 – 15 UPA; Locate highest density units away from ALR edge.
Area 4b: Residential Lands South of 92 Avenue (Anniedale)	<ul style="list-style-type: none"> Minimum Residential Building Setback varies depending on amount of Green Space Transfer Area. Minimum 107.5 m towards the west, and up to maximum 207.5 m towards the east. Reference Planning map for details. <p><i>See Design Cross Section Figure 4.6</i></p>	<ul style="list-style-type: none"> Between 100-200 m Planted and/or existing natural vegetation as identified by Green Space Transfer Area Mapping. 	<ul style="list-style-type: none"> Open space components of Buffer could be designed with water retention capacity or adequate rainwater management systems. Prioritize preservation of existing high value vegetation. 	<ul style="list-style-type: none"> 20 m Local (Lakiotis Road) may form a portion of the Buffer Area in certain Areas. 	<ul style="list-style-type: none"> High Density Cluster 10 – 15 UPA; Locate highest density units away from ALR along or near 92 Avenue.

Anniedale-Tynehead NCP: Urban-Agricultural Edge Development Guidelines

Table 4.1

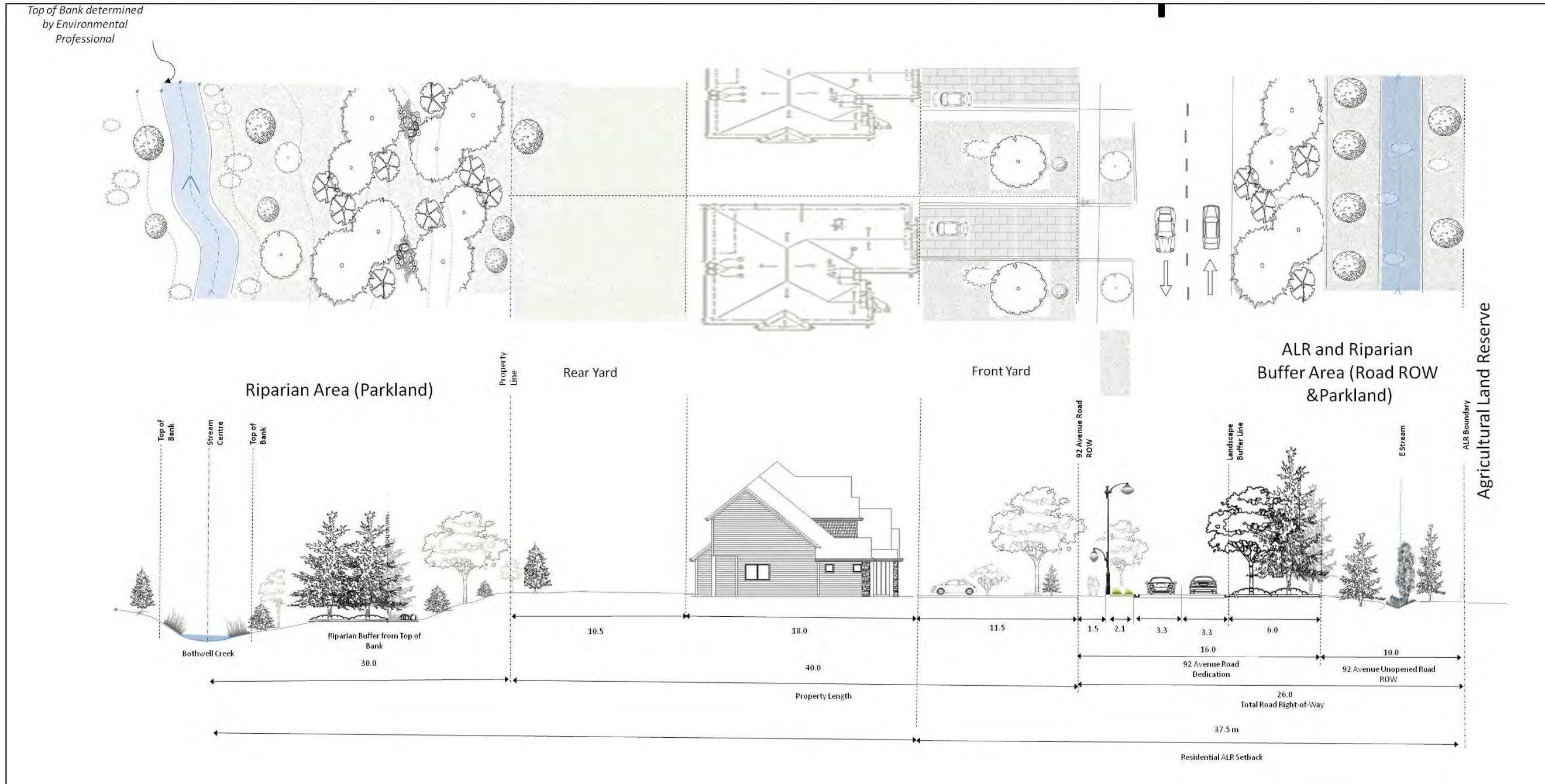


FIGURE 4.2

AREA 1:
Residential Interface along ALR Edge in Suburban Cluster Area at the South West Boundary. (Tynehead)

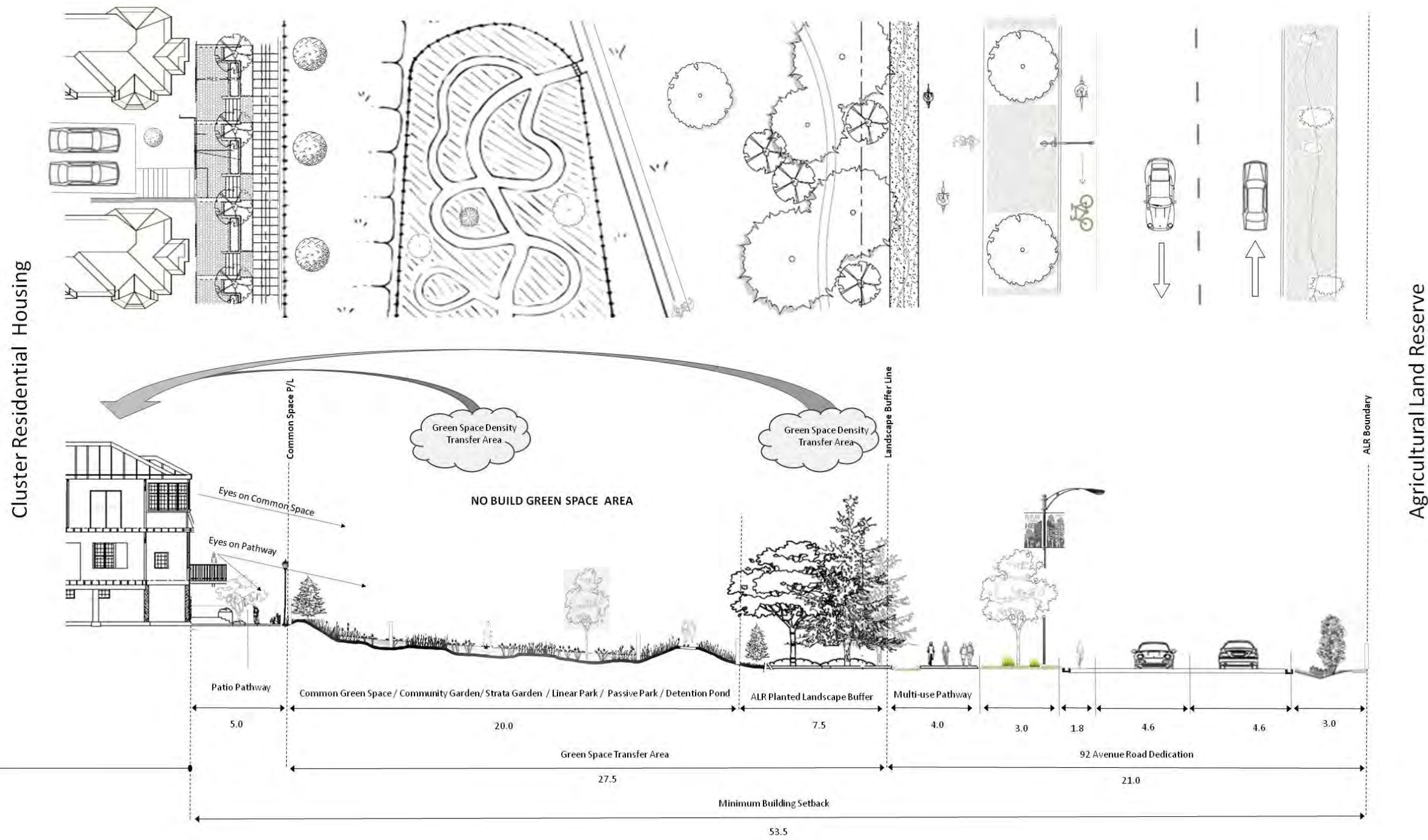
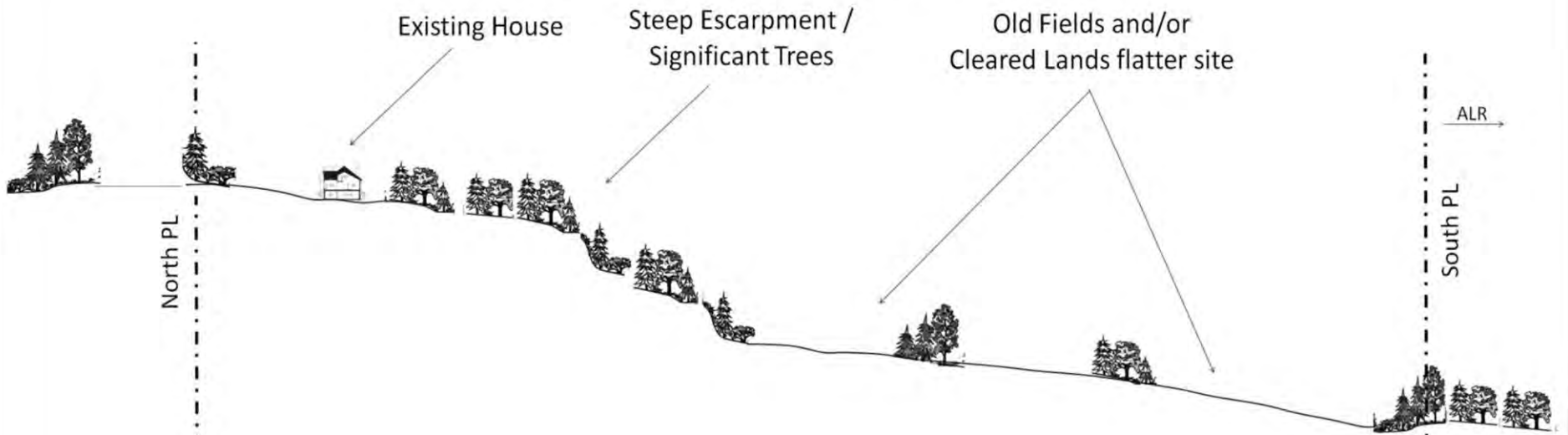


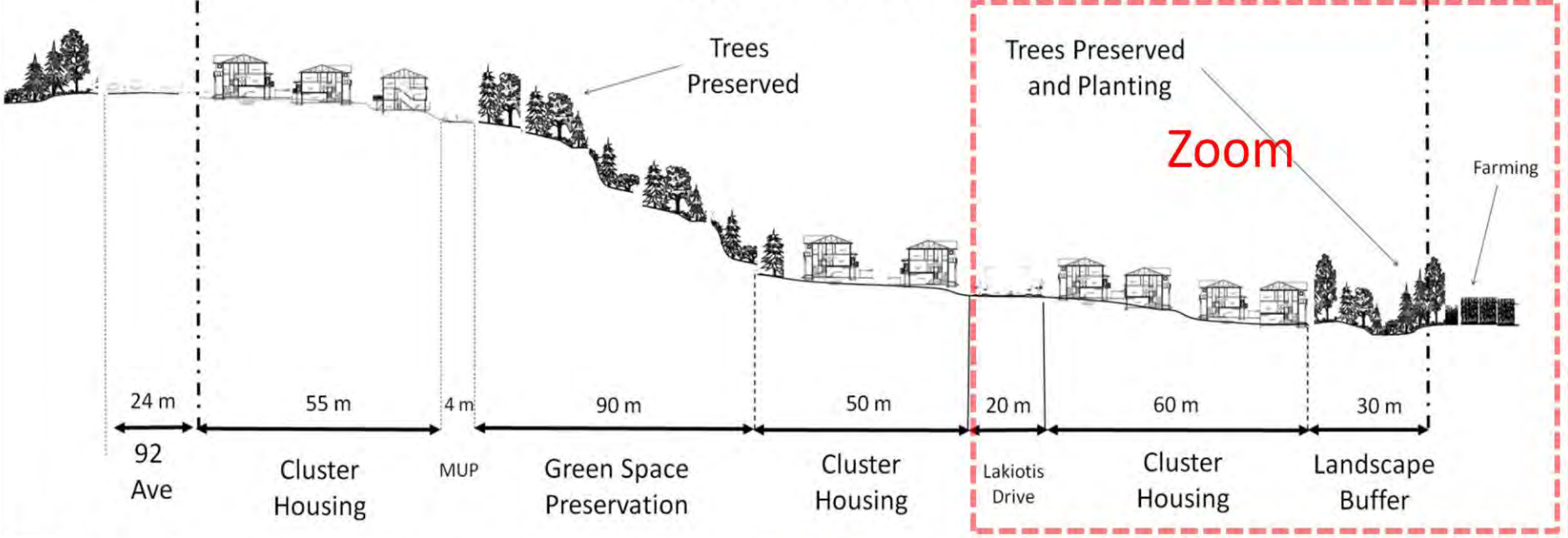
FIGURE 4.3
 AREA 2:
 Residential Interface along ALR
 Edge with 92 Avenue Road
 Separation.(Tynehead)



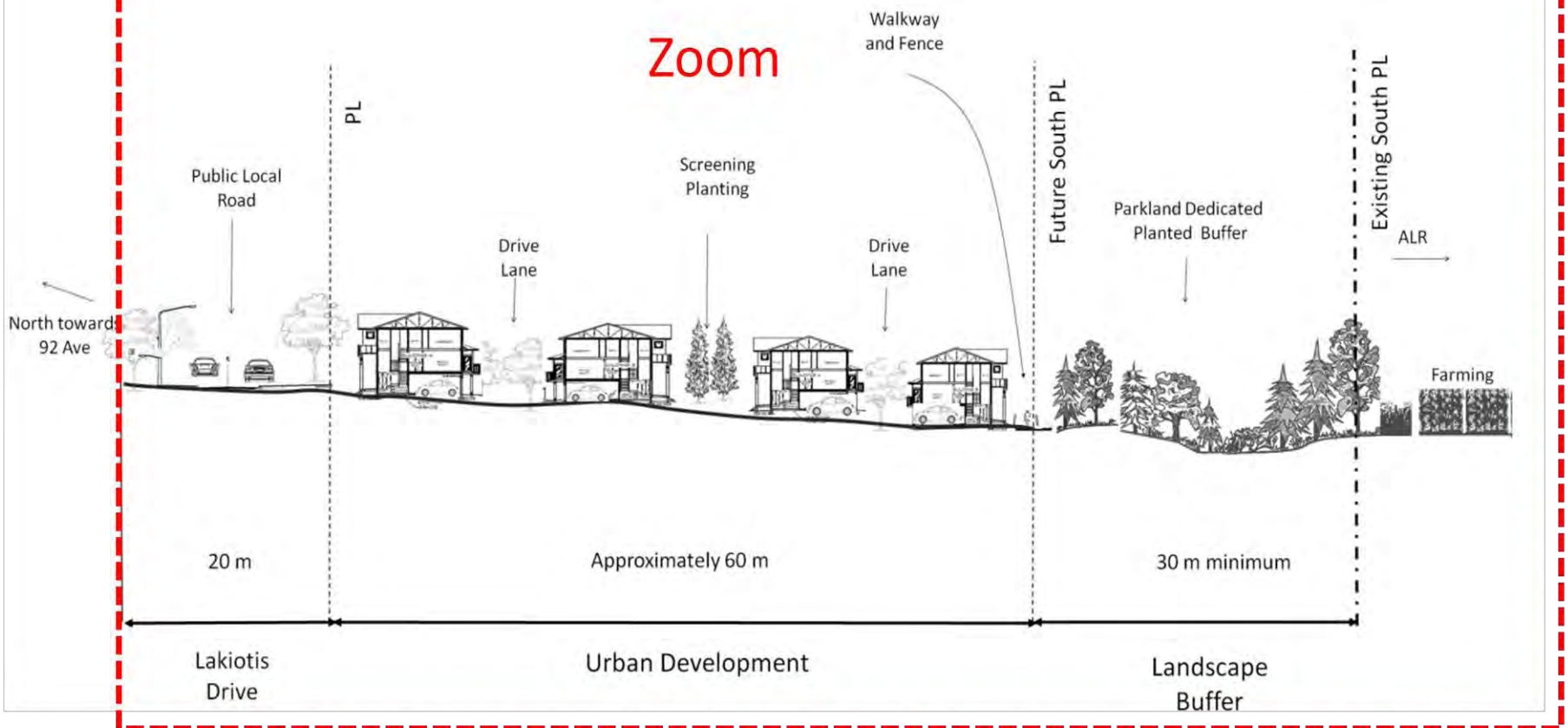
Existing Hillside



Future Hillside



Zoom



**Anniedale-Tynehead
NCP**

**Cluster Housing Lands
South of 92 Avenue - Anniedale West**

**Figure
4.4 AREA 4a**

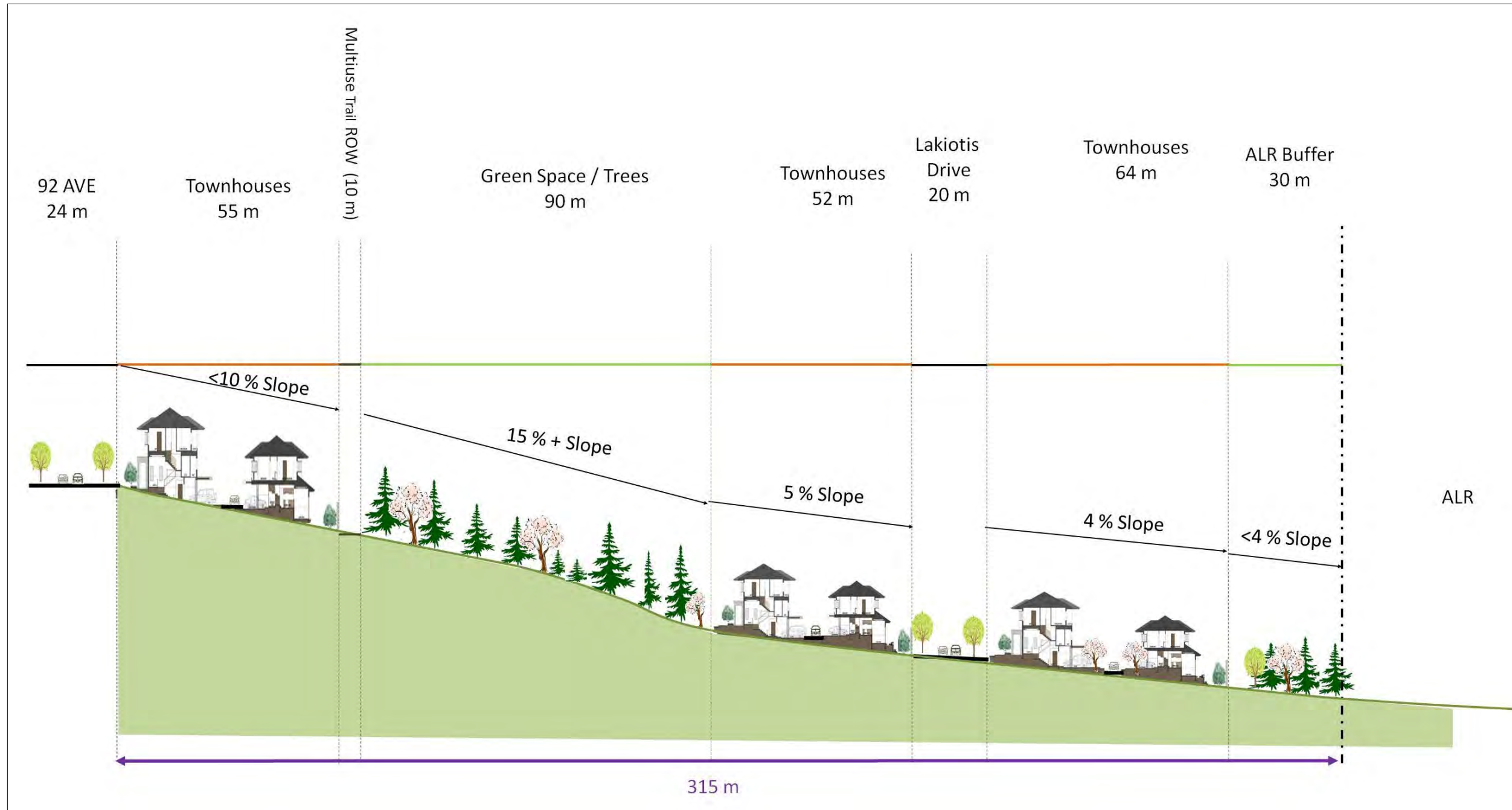


FIGURE 4.5
 AREA 4a:
 Cluster Residential Escarpment Interface along ALR Edge south of 92 Avenue minimum 30 meter Buffer (Anniedale-West)

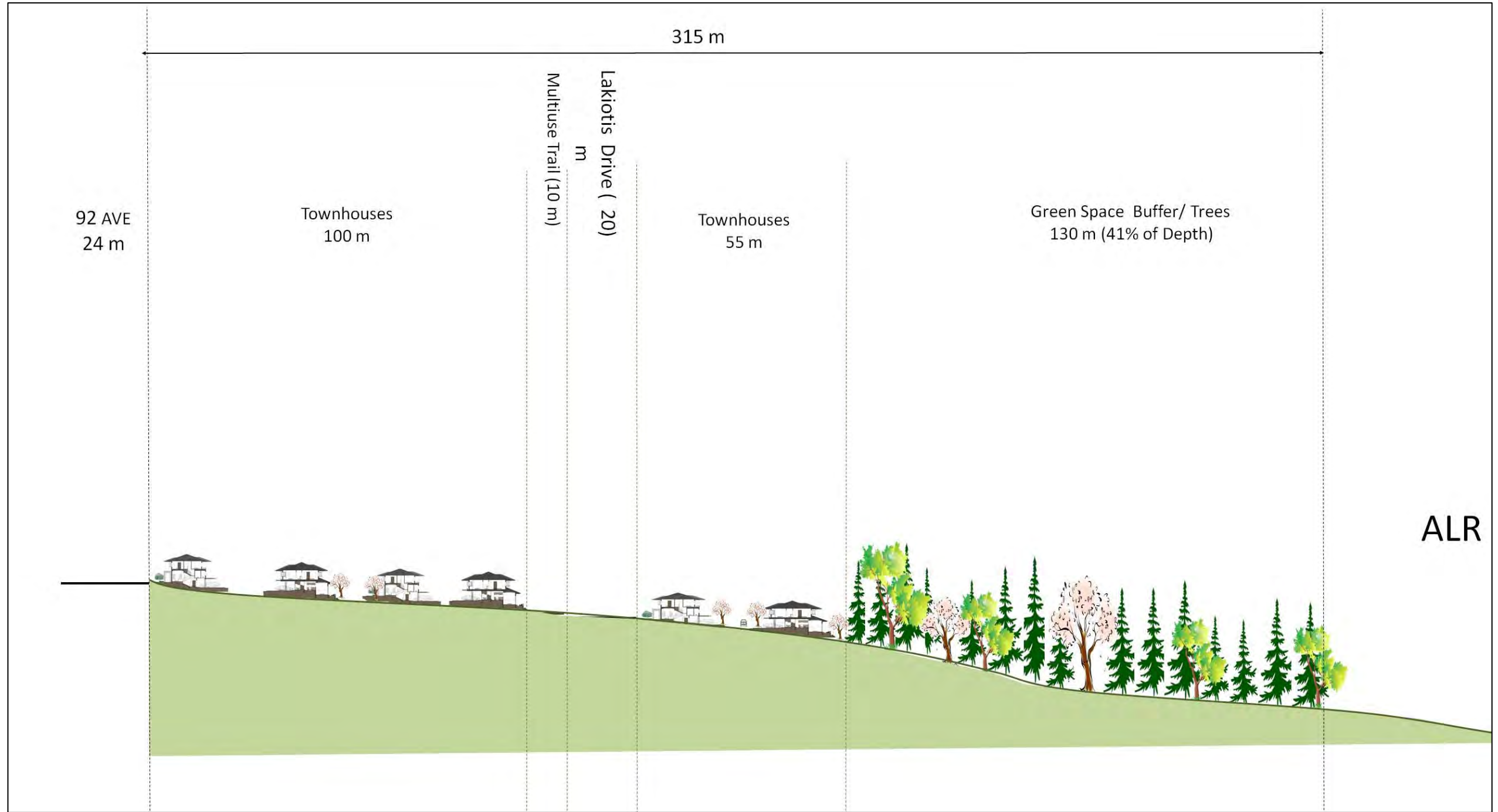


FIGURE 4.6

AREA 4b:
Cluster Residential Escarpment Interface along ALR Edge south of 92 Avenue minimum 100 meter + Buffer
(Anniedale-West)

4.2 ENVIRONMENTAL MANAGEMENT



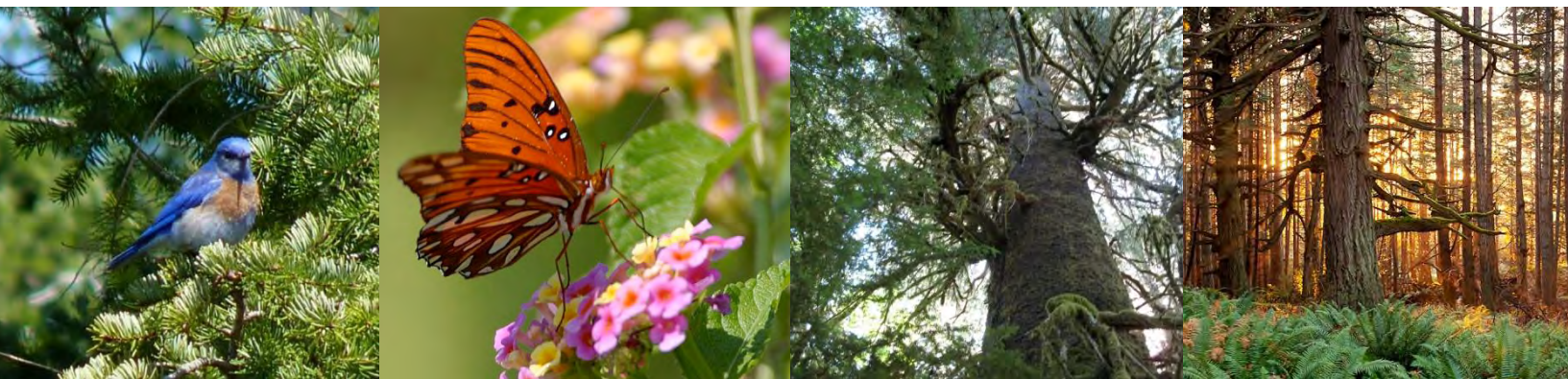
Rapid urbanization, has resulted in significant impacts on the natural environment, including the alteration of habitats, an increase in the numbers of plant and animal species 'at risk', and a decline in air and water quality. Maintaining a healthy natural environment during urban and land development benefits each of us in many ways.

A healthy environment enhances the quality of life for the whole community and benefits local governments by providing free 'ecosystem services' such as rainwater management and maintenance of clean air. The use of good environmental practices and environment-friendly techniques by the development community can reduce costs and produce superior developments that have higher market value. Implementing good environmental practices also ensures compliance with federal and provincial legislation and demonstrates due diligence in environmental protection and stewardship.

The following provides guidelines for:

- A. Protection of Aquatic Habitat;**
- B. Species at Risk and Regional Significant Species;**
- C. Wildlife Hubs and Corridors;**
- D. High Value Vegetation, Trees and Rare Plant Species; and**
- E. Ecologically Significant Areas.**

For more detailed information please refer to Provinces Develop with Care document and its contents which describes the Ministry's approach to results-based management and also City of Surrey Environmental Policy and Bylaws.



A. Protection of Aquatic Habitat

Riparian Buffer Zone

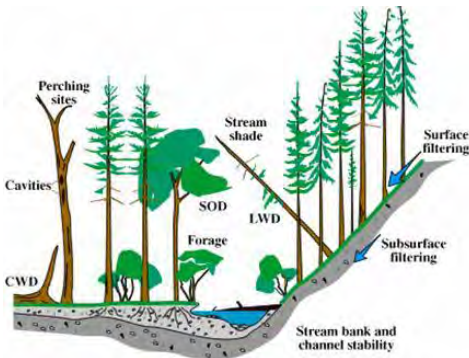
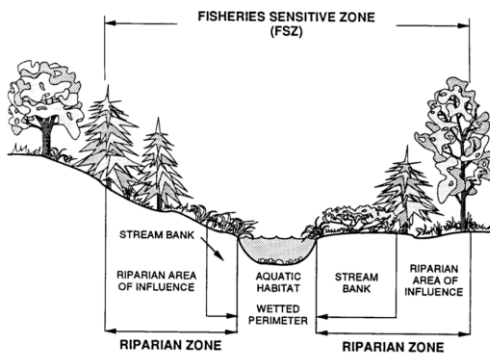
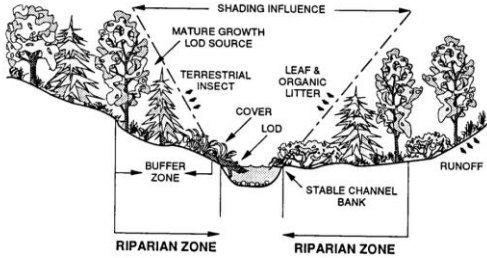
The primary objective of leave strips is to protect the riparian zone, which is critical to the maintenance of a healthy aquatic environment. Riparian zones, located next to streams, rivers, lakes and wetlands, have direct influence on aquatic habitat values. They can broadly be described as the area of the streambank, including any side channels and associated banks, and the area of influence, which contains upland areas not normally inundated during high water conditions.

Leave strips should be provided on all watercourses that flow into or contain fish or fish habitat. This may include wetlands, ponds, swampy areas or other intermittently wetted areas, small streams, side channels and ditches which may not flow throughout the entire year (ephemeral). The leave strip also helps to protect private property from flooding and potential loss of land due to stream erosion and instability. The riparian zone has characteristics that protect and nurture quality aquatic fish habitat. Disturbance or destruction of the riparian zone can have serious impacts to both the short and long-term viability and productivity of fish and fish habitat.

Riparian Setbacks

Under the existing City of Surrey bylaws, the degree of protection afforded to drainages is dependent on stream classification and the density of proposed development.

The maximum 30 m buffers are indicated in the Madrone Environmental Study mapping due to the fact that top of bank is undetermined and future zoning and other detailed on site stream assessments are unknown. The density of development adjacent to more significant fish habitat (e.g. the Serpentine River and Bothwell Creek) is less than 6 units per hectare, that the stream would receive a riparian setback of 15 metres, as per current City of Surrey bylaws. But, due to, City of Surrey Official Community Plan Policy, the significant sensitivity of the habitat, floodplain considerations and the considerable site potential for the development of riparian habitat, the setback should be no less than 30 m from top of bank for the Serpentine River and its direct tributaries regardless of the proposed density of development.



“Petitions for variances to Riparian leave strip widths and any watercourse classification or location changes may be considered but must include site specific Environmental Assessment from a Qualified Environmental Professional . Setback or stream reclassifications must be approved by the Department of Fisheries and Oceans (DFO) and Ministry of Environment (MOE), through the City of Surrey Environmental Review Committee (ERC).”

Permanent Protection of Leave Strips

The leave strip should be permanently protected using one of the following methods:

- Dedication as park, by return of the land to the Crown in the name of the City of Surrey;
- re-zoned as a protected natural area or reserve status;
- secured with restrictive covenants; or
- secured with a combination Statutory Right-of-Way and Restrictive Covenant.

Determining Leave Strip Widths

Minimum leave strip widths for riparian zone protection can be established with these guidelines. The Top of Bank must first be determined; and then the widths specified are measured from that Top of Bank.

They are measured perpendicular to and away from the stream bank, for the distance specified, on both sides of the stream. These are suggested minimum widths and may be altered by DFO/MOE staff to suit onsite conditions.

See **Figure 4.7** for recommended minimum leave Strip widths.

FIGURE: 4.7 MINIMUM REQUIREMENTS FOR RIPARIAN LEAVE STRIPS

	Proposed Land Use Type, or Density	Minimum leave strip width	Leave Strip Illustration
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">LOWER INTENSITY RESIDENTIAL LAND USES</p>	<p>Lower Density Residential Development Areas < 6 Units Per Acre</p>	<p>*15 Meters on each side of watercourse from top of bank</p> <p><i>Give careful consideration to establishing the existing top of bank in wide flood plain or multi-channel areas, and features such as floating vegetation mats, undercut banks and seasonally dry areas.</i></p>	
	<p>Lower Density Residential Development Areas <6 Units Per Acre</p> <p>Watercourse with steeply sloped topography</p>	<p>*If the distance from the high water mark to the toe of the slope is less than 15 meters, then the leave strip should be located at the first significant and regular break in slope which is a minimum of 15 meters wide.</p>	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">HIGHER INTENSITY LAND USES</p>	<p>Commercial/ Industrial/ Business Park/Higher Density Residential Areas >6 Units Per Acre</p>	<p>*30 Meters on each side of watercourse from top of bank</p> <p><i>Give careful consideration to establishing the existing top of bank in wide flood plain or multi-channel areas, and features such as floating vegetation mats, undercut banks and seasonally dry areas.</i></p>	
	<p>Commercial/ Industrial/ Business Park/Higher Density Residential Areas >6 Units Per Acre</p> <p>Watercourse with steeply sloped topography</p>	<p>If the distance from the high water mark to the toe of the slope is less than 30 meters, then the leave strip should be located at the first significant and regular break in slope which is a minimum of 30 meters wide.</p>	

*Refer to **Figure 4.8** for Drainage Buffer Widths required along the Serpentine and its direct tributaries.

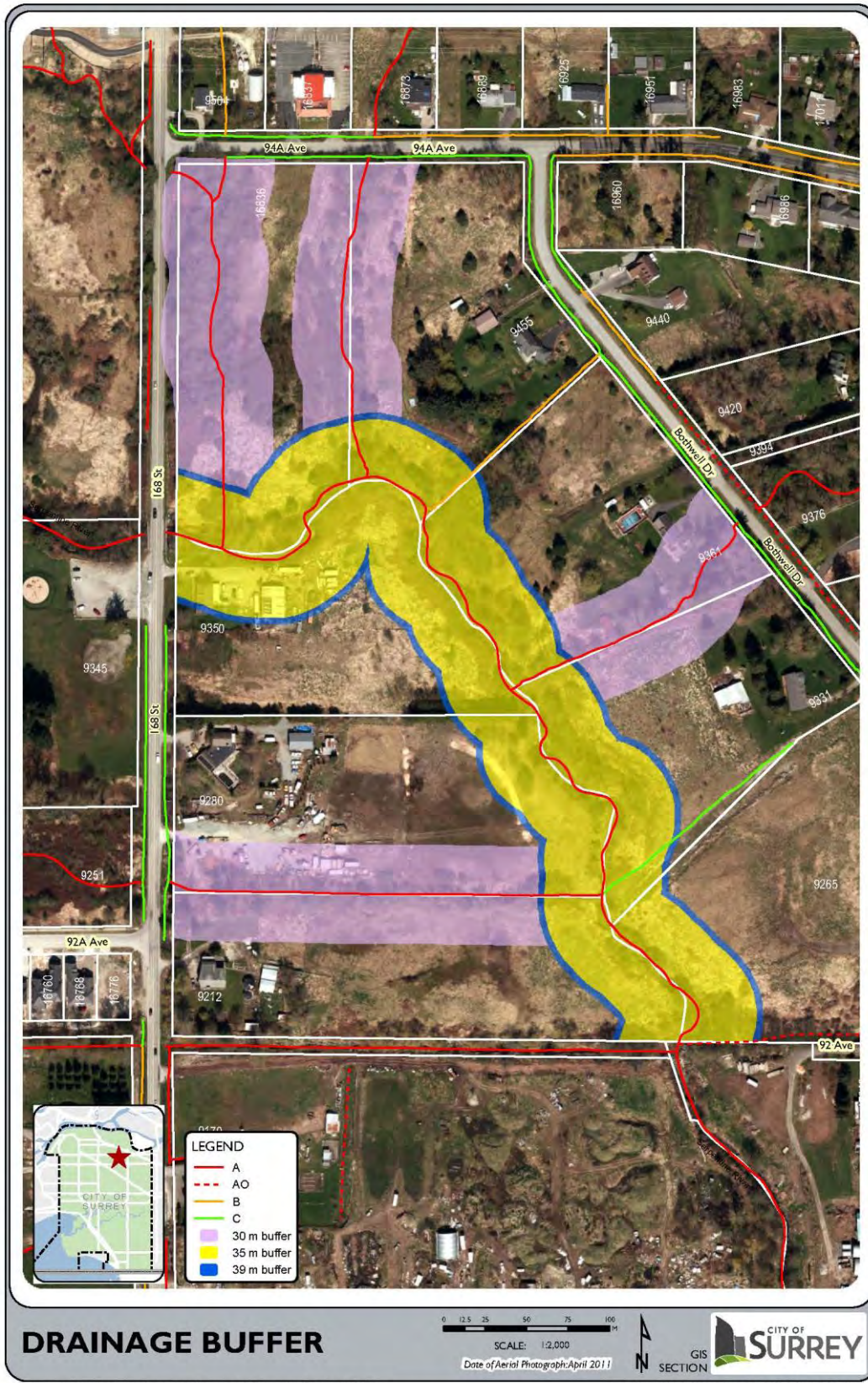


Figure 4.8

This map identifies the Minimum buffer widths required along the Serpentine River and its tributaries.

Buffer widths range from 39 m along the Serpentine River and 35 meters along its direct tributaries no matter the density or type of development.

General Opportunities for Fish Habitat Improvements



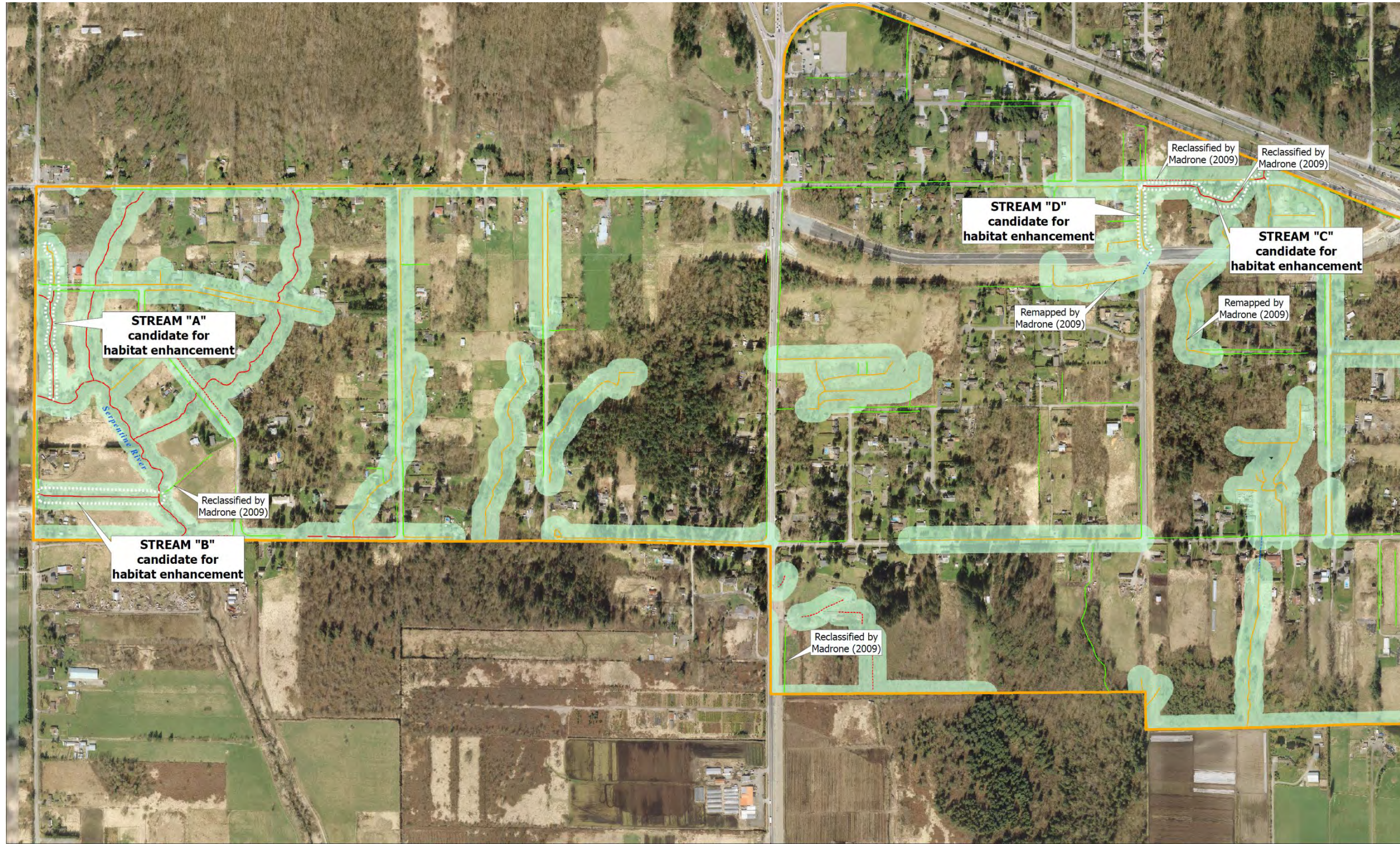
It is likely that habitat enhancement opportunities occur throughout areas of existing fish habitat (e.g. the mainstem Serpentine River). Instream modifications would lead to increased habitat diversity and an associated increase in fish productivity. Instream habitat enhancement projects that would be of benefit include (but are not limited to): log bank cover construction, rock/log weir construction, strategic instream boulder placement, gravel catchment/placement, installing wing/flow deflectors, LWD placement and off channel habitat development.

Riparian planting (including planting to increase bank stabilization) would be a habitat improvement option adjacent to existing fish habitat. For example, where it flows through the study area, the Serpentine River is currently associated with a riparian zone that offers limited biological function, largely due to the narrow treed riparian strip. The existing green space adjacent to the treed riparian zone of the Serpentine River results in the potential for improvement and the establishment of a wider functioning riparian zone.

Specific Opportunities for Fish Habitat Improvements

Restoration and/or enhancement of fish habitat would be most beneficial in areas that are known to currently support fish, or in immediately adjacent areas with sufficient potential (e.g. adequate water availability). To attempt to restore or enhance the majority of any of the Class B and Class C drainages on site (non fish-bearing systems) would be expensive and likely prone to failure. Marginal habitat that currently supports fish can be improved in several locations, which would result in increased fish productivity.

Figures 4.9 display the four candidate areas (labeled “A” to “D”) that were identified in the Madrone Environmental Study as having the most potential for habitat restoration and enhancement. In all cases, the habitat enhancement/restoration that is described in the Madrone report represents suggested measures that would require detailed design prior to implementation.



Anniedale-Tynhead NCP
Riparian Areas
Restoration Opportunities

Figure 4.9

B. Develop with Care Practices: Species at Risk and Regional Significant Species

Develop with Care best management practices should be integrated into development planning process. Enshrining long-range habitat protection measures is a necessary backstop for threatened species habitat protection and recovery. Areas of better management practices for species that may be pertinent to the study area are drawn from MoE's Develop With Care series and the guidelines should be considered at all stages of the land development process, specifically for:

- **Pacific Water Shrew**
- **Raptors and Owls**
- **Amphibians**
- **Salmon and Trout**

C. Wildlife Hubs and Corridor Management

Recommendations for wildlife hubs and corridors are built on the results of wildlife habitat suitability ratings in conjunction with the results from the vegetation and ecosystem ratings in Madrone Environmental report.

Figure 4.10 Vegetation Ranking and Wildlife Corridor Opportunities Map which illustrates our recommendations for best potential wildlife hubs and travel corridors. This can be thought of, in effect, as a “fine filter” approach to habitat conservation. That is, if the life history needs of the focal species in this study are conserved then habitat will likely be available to a wide range of generalist species.

Wildlife corridors should be as wide as possible. Potential ways to achieve this are to cluster housing away from ecologically significant areas, provide conservation easements, or buffers, on development which occur adjacent to wildlife corridors and to enact strict lighting restrictions near corridors. Much wildlife activity occurs between dusk and dawn and increased lighting in wildlife reserve areas could impact safety and concealment of prey species.

Barriers to wildlife movement exist in several places. Highway 15 (176th Street) essentially bisects the study area into two distinct zones. Wildlife underpasses were not included in its recent upgrade and this presents a barrier to virtually all species except for larger mammals. This also applies to the new Golden Ears Parkway which essentially cuts off the triangle of land on the north perimeter of the study area.

Deer are common throughout north Surrey and migratory routes should be considered when planning future wildlife corridors. In establishing wildlife corridors, deer should be managed so as to maintain seasonal movement throughout North Surrey.

D. High Value Vegetation, Trees and Rare Plant Species

The study area is within the CWHxm subzone has the potential to contain at least 26 rare plant species; however, the Anniedale-Tynehead NCP Area contains no occurrences of species of conservation concern. Despite a careful survey, no rare plants during the TEM fieldwork were observed; however, this does not conclusively rule out their occurrence. A more detailed vegetation survey would be required to ensure that rare plants are not present.

Rare Ecosystems

All of the forested ecosystems mapped in the study area are considered at-risk in BC, including three red-listed and two blue-listed site series. These ecosystems are threatened or of special concern due to development and harvesting pressures on the coast. Over 150 ha of forested rare ecosystems occur in the study area, occupying over 36% of the land base. The majority of these forests are immature and are dominated by broadleaf trees or a mix of broadleaf and coniferous trees. Although they will likely develop into mature conifer forests with time (in some cases centuries) they are still classed as red or bluelisted ecosystems.

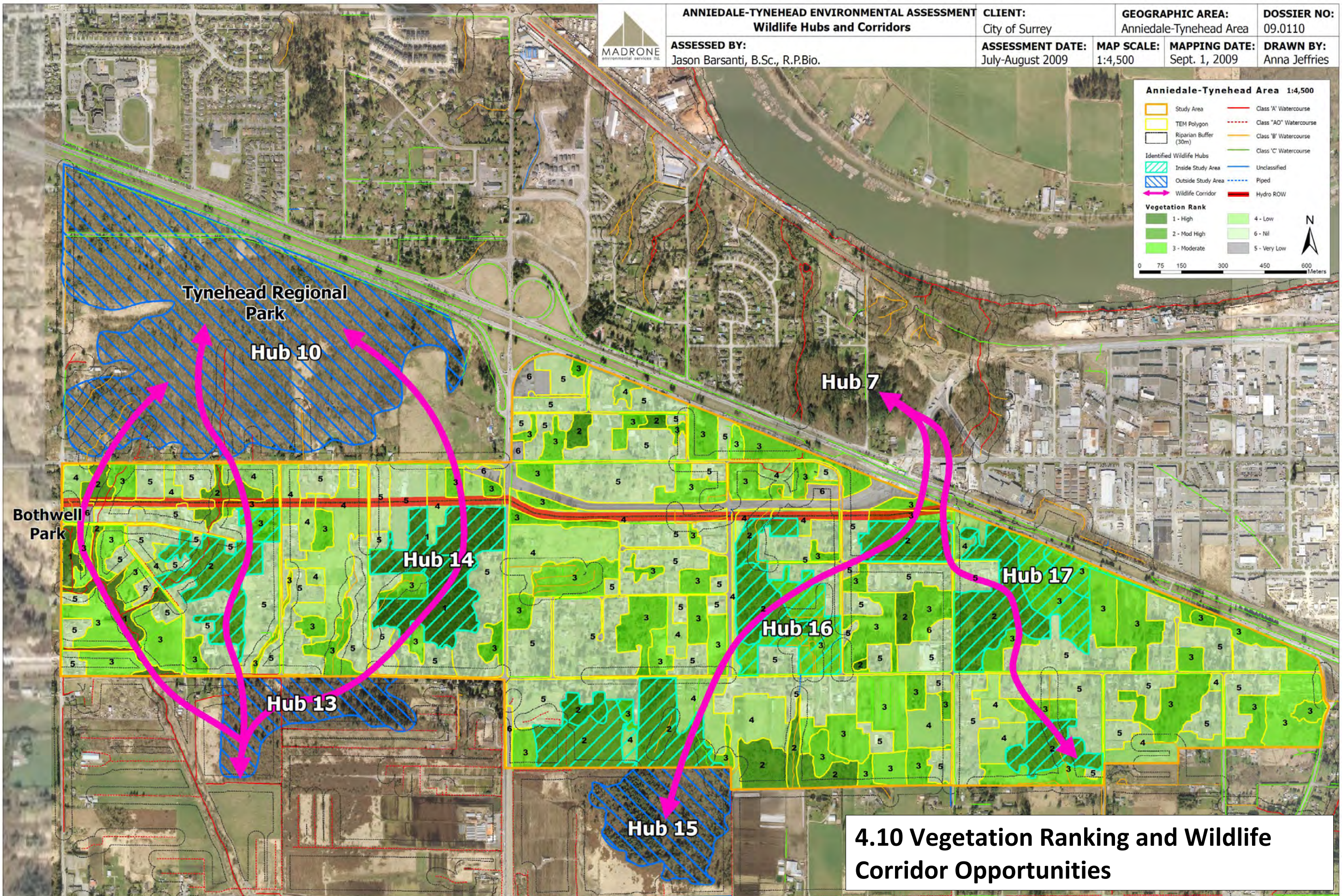
Go to the British Columbia Species and Ecosystems Explorer: Species and Ecosystems Search for more information: <http://a100.gov.bc.ca/pub/eswp/>

High Value Ecosystems

Four elements were considered when ranking ecosystem polygons for potential for vegetation value and to help protect ecosystems and species in the project area. Ranking took into account the value of:

- Critical habitat for significant wildlife species and for support of biodiversity (Ecosystem label element).
- Significant and valuable tree stands or specimens, including tree species and areas with a high potential for retention (structural stage element).
- Watercourses, watersheds and groundwater recharge areas (including associated features such as wetlands and riparian zones) (Riparian features element).
- Natural areas with potential to provide habitat corridors or greenways linking to other green spaces within and beyond the study area (Polygon size element).
- For each polygon, the four elements were given a value of 1 to 6; a value of 1 is the highest rating.

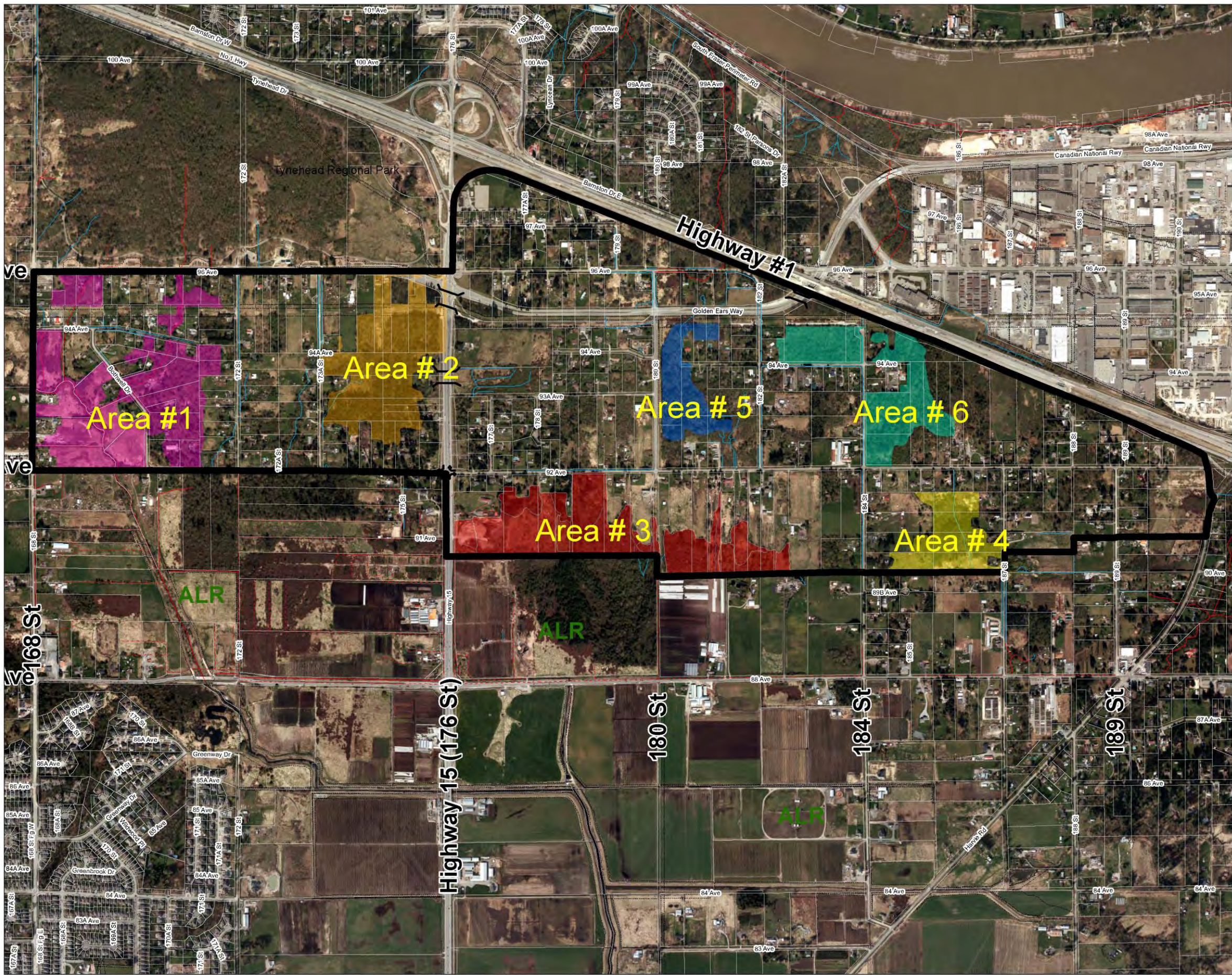
See **Figure 4.10** - Vegetation Ranking Map and Wildlife Corridor Opportunities for details



Significant Ecosystem Hub Areas

Significant Ecosystem Hub Areas within Anniedale-Tynehead NCP where derived from vegetation and species values, and the Surrey Ecosystem Management Study Green Infrastructure Opportunities mapping generally shown in **Figure 4.11**. These areas are high priority areas for future Parkland Acquisition, Riparian Area Management and dedication, Cluster Housing, Agricultural Buffers, ecological enhancement or Tree protection depending on underlying land use designation.

- Area# 1:** The Serpentine River watershed and connecting tributaries connect to forests to the north into Tynehead Park and south along the Serpentine River system. This Ecological Hub has moderate to high conservation value, and is a key area for Riparian Area management and stream enhancement priorities. A 30 m buffer from Top of bank is proposed along this watershed, and cluster housing areas adjacent to the stream outside the buffer to preserve and enhance green space values.
- Area #2:** The large forested polygons in the west central region of the study area identified as Ecosystem Hub #2. The majority of this stand is designated as future parkland, with the remainder made up of buffer, cluster housing, and commercial areas. Green Connections to the North towards Tynehead Park should be considered as part of development in the northern section of the hub area in the form of tree planting and buffers between commercial and residential areas.
- Area #3** This Ecosystem Hub is made up of deciduous and conifer forests and associated drainages from Lakiotis Creek watershed this is a large, relatively undeveloped area that has older agricultural fields and mixed forests. Conservation of high value vegetation and tree stands must be considered in Cluster Residential areas within this Hub. Areas below Lakiotis Drive will be considered high priority for retention and parkland dedication, as well as coniferous tree stands to the north in return for density transfer potential. Planting of understory areas to increase biodiversity values is recommended to enhance tree growth and buffering against the ALR boundary.
- Area #4:** This area is comprised of moderate to high value vegetated areas. This Ecosystem Hub is rated as having high vegetation value that is an excellent candidate for conservation because of the drainage and connectivity to the forests to the south. Parkland acquisition, riparian dedication and enhancement and cluster housing priorities dominant this areas future land use.
- Area #5:** This area is comprised of forest stands and moderate value vegetation cover with poor drainage. Portions of this hub are proposed as Future Park and cluster housing in efforts to preserve tree coverage and natural flow regimes.
- Area #6:** This ecosystem hub is comprised of moderate to high value mixed stand tree cover and provides opportunities for Cluster housing and vegetation buffers. Contiguous areas of natural vegetation should be considered during redevelopment of this area to ensure green space along the northern edge of the plan.



Legend

- Area #1
- Area #2
- Area #3
- Area #4
- Area #5
- Area #6

Anniedale-Tynehead NCP
Significant
Ecosystem Hubs

The accuracy and completeness of information shown on this drawing is not guaranteed. It will be the responsibility of the user of the information shown on this drawing to locate and establish the precise location of all existing information, whether shown or not.

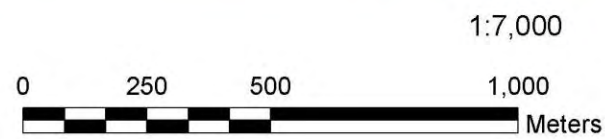


Figure 4.11



4.3 GREEN SPACE AREA GUIDELINES

A. Parkland Acquisition and Dedication

Where a lot is split designated (e.g. Park and Residential use), in the Anniedale-Tynehead Land Use map, the park acquisition will be handled at the time a development application is made. Parks will purchase lands that are above and beyond the requirements of the Local Government Act.

Through the development application process, the developer would work with the City's Realty Division to determine an appropriate purchase price for any areas exceeding the dedication requirements of the application. There are many factors that determine the value of the property and would have to be assessed through the development process. For lands that are entirely designated as Park, the owner can initiate the Parks purchase with the City at any time;

B. Green Space Transfer Areas Dedicated as Parkland

Step 1: Density from Green Space Areas is transferred onto the developable portion of the lot.

Step 2: At time of subdivision, the green space is conveyed to the city and labelled as "Park" on the subdivision plan.

Step 3: Since density is increased on the lot, the compensation for the green space portion of the land is awarded through density bonus principle; therefore a City Park purchase is not required.



C. Green Space Transfer Areas Retained on Private Lands

Density value from the Green Space Transfer area is to be transferred onto the developable portion of the lot. The green space area is protected through a No Build Restrictive Covenant and held in private or common strata ownership. The green space area remains part of the lot, and can be counted toward the outdoor amenity space requirements for multi-family sites.

D. Riparian Area Dedicated as Park

The green space transfer value (or density value), of lands within the setback area can be used in the Green Space transfer calculation at 50% of the density value. Lands within 5-metres from top of bank cannot be calculated in the Green Space transfer area. **Figure 4.12** identifies Park Acquisition and dedication areas within the Plan.



Additional lands for the meander of the Serpentine River (between 7-10 metres) can be included in the Green Space transfer area at full density value.



Compensation for the Green Space lands is provided through the value of the density transfer onto the developable portion of the lot, therefore, therefore, a park purchase is not required. **Figure 4.13** identifies the overall plans for Riparian Compensation and Dedication within the Anniedale-Tynehead NCP.

E. Detention Ponds

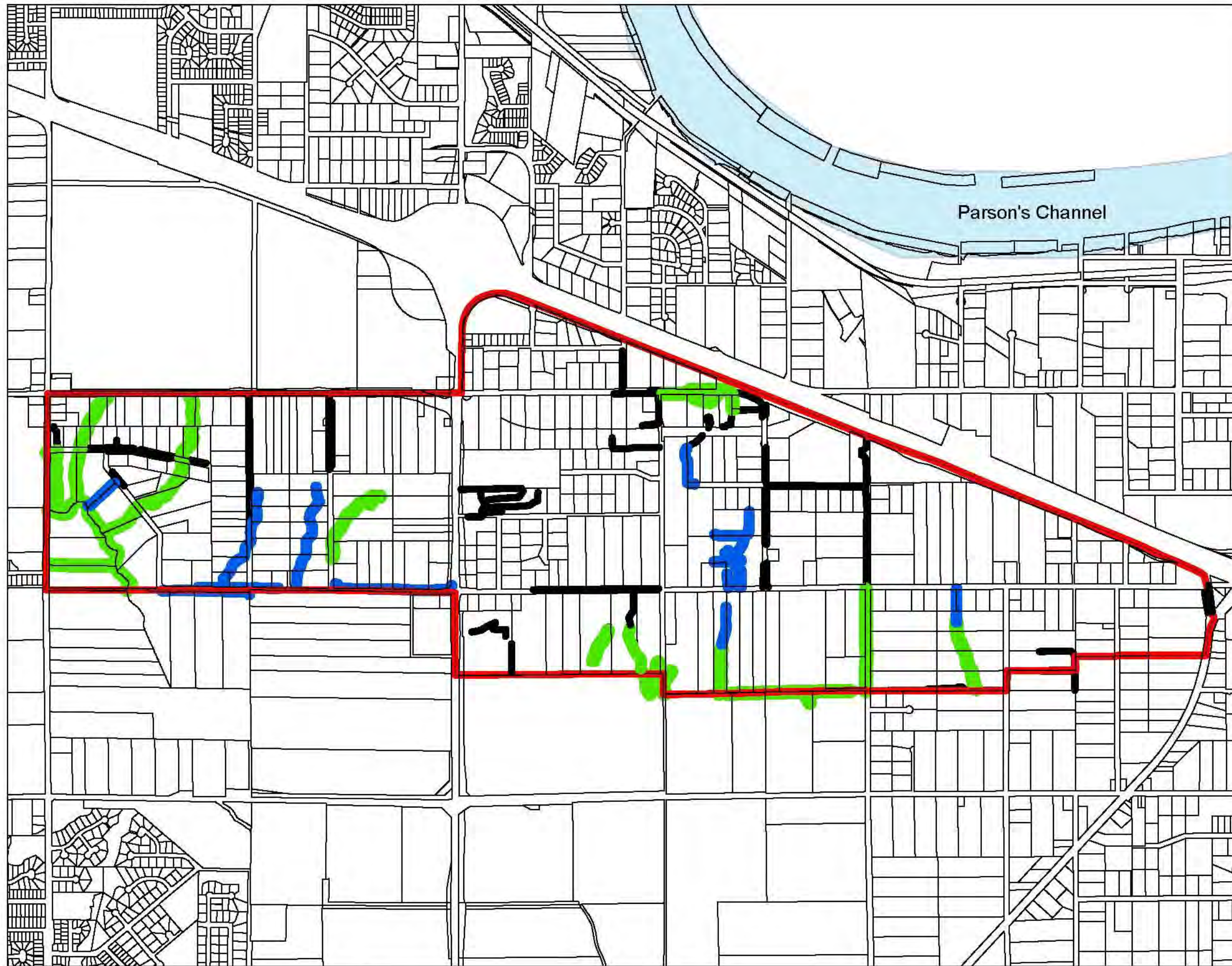
The first developer in a sub-catchment requiring a detention or water quality pond shall secure the land and construct the pond before or as development begins.

(See Section 2, Part 7 Stormwater, 7.2 Proposed Servicing Plan, for more details).







F. Riparian Enhancement Area

Those lands designated as “Riparian Enhancement” in the Anniedale-Tynehead NCP will be purchased by the City for drainage purposes and enhanced to improve the Serpentine River area.



Legend

-  Anniedale-Tynehead NCP Area
-  Retain through RC or Cluster Housing
-  Retain as Parkland (Dedicated Leave Strip)
-  Compensation Needed (DFO requirements)

Anniedale-Tynehead NCP
Proposed Riparian
Retention and
Compensation Areas

The accuracy and completeness of information shown on this drawing is not guaranteed. It will be the responsibility of the user of the information shown on this drawing to locate and establish the precise location of all existing information, whether shown or not.

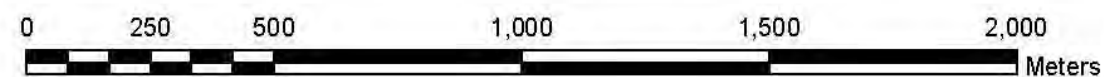


Figure 4.13

4.4 CLUSTER HOUSING DEVELOPMENT GUIDELINES

Development Guidelines for Cluster Residential Areas:

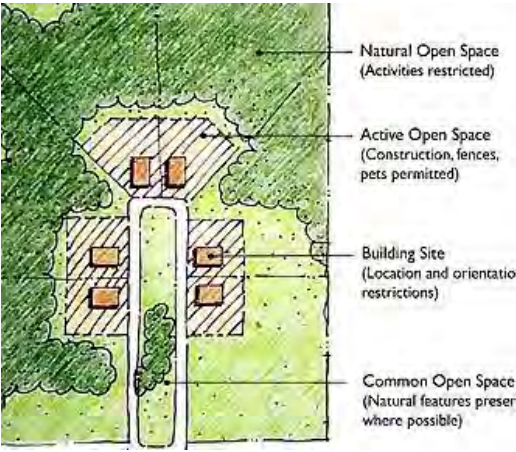
A. Application

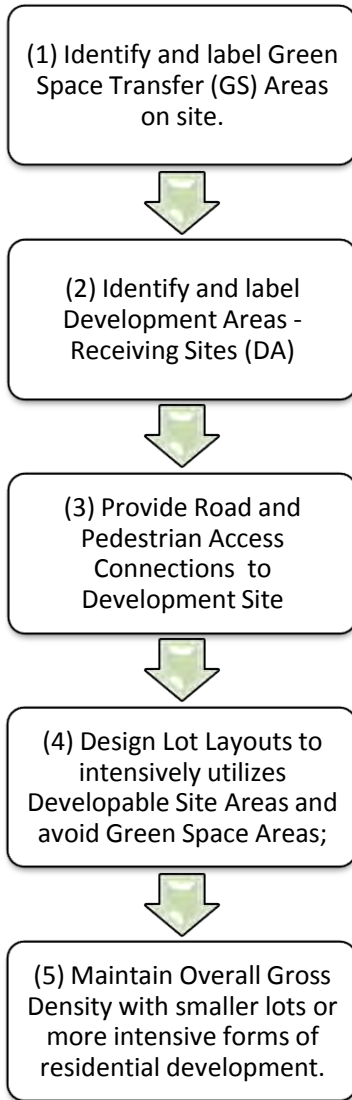
- Cluster housing guidelines apply to the four “Cluster Residential” designation areas within Anniedale-Tynehead Neighbourhood:
 - Suburban Cluster 2 UPA
 - Low Density Cluster Residential 4-6 UPA
 - Medium Density Cluster Residential 6-10 UPA
 - High Density Cluster Residential 10-15 UPA

- The minimum parcel or consolidation size for development consideration in cluster areas is identified in **Part 4.0** or else is restricted to a 5 acre minimum.

B. Green Space Transfer Areas (GS)

- “Green Space Transfer” areas refer to the areas of a site where preservation of open space occurs. The potential density from the green space transfer area is intended to be transferred to the “development area” of a site and is generally identified in Green in **Figure 4.14**. A formal survey will be required to outline exact location and amount of Green space transfer Areas and they must be identified as such on any subdivision plans.
- The following areas or land uses may not be counted as a part of designated green space transfer areas:
 - Areas Covered by any Structures or Buildings;
 - Road Rights-of-way and utility easements;
 - Property Setbacks and private front or backyard areas;
- The following areas shall be high priorities for inclusion as designated Green Space Transfer areas:
 - DFO Riparian Dedication Setback Areas and Utility Corridors;
 - Landscape Buffers separating uses;





- Agricultural Land Reserve Buffers;
- Ecologically Significant Vegetation Areas (Value of 1, 2 or 3 as identified in the 2009 Madrone Environmental Assessment);
- Passive Recreation and Trail Areas;
- Additional Streamside Protection areas beyond DFO setback requirements (Serpentine River Meander Areas);
- Ecosystem Hub, Site, or Corridors areas as identified in Surrey EMS;
- Steep or unstable Slopes (Greater than 15%);

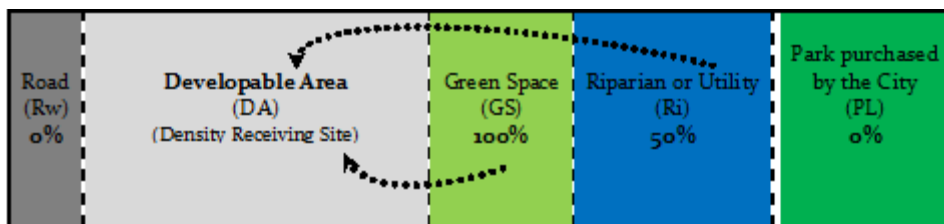
- At least 75% of designated open green space shall be contiguous, with no portion less than 20 meters wide.
- Portions of the Green Space Transfer areas may be "community space" and may be used for public passive or active recreation, community gardens, or rainwater management facilities that meet all design, construction, maintenance, and public safety requirements set forth by the City of Surrey Engineering Department.

C. Development areas – Receiving Sites (DA)

- Development Areas, identified in **Figure 4.14** refer to the portion of the site where buildings should ideally be located. These areas are intended to be developed intensely, so that preservation can occur on other portions of the site. Individual Tree protection within Development Areas may still apply, as per the City of Surrey Tree Protection Bylaw.

D. Determining Cluster Housing Unit Yield

- Density Transfer Values for sites with a "Cluster" Designation:
 - 100% of site's density designation value from Green Space Transfer Areas
 - 50% of site's density designation value from Riparian, Gas, or Hydro ROW Areas
 - 0% from Road Dedication Areas
 - 0% from land purchased for Park by the City



- The total number of residential units allowable within a cluster development site shall not exceed the number of units allocated in the Anniedale-Tynehead land use designation based on a Gross density principle. The total maximum number of developable units allowed shall be determined using the following formula:

CLUSTER HOUSING - DWELLING UNIT FORMULA	
$DU = BD[(DA+GS+^{1/2}R+^{1/2}U)]$	
$D_{welling} U_{nits} = B_{ase} D_{ensity} [(D_{evelopable} A_{rea} + G_{reen} S_{pace} + ^{1/2} R_{iparian} + ^{1/2} U_{tility})]$	
Where:	
DU	= Dwelling Unit (Potential)
BD	= Base Cluster Density (dwelling units per acre)
DA	= Developable Area/ Receiving Site (acres)
GS	= Green Space Transfer Area (acres)
R	= Riparian Leave Strip Area
U	= Utility Corridor (acres)

Cluster Housing Development Yield Formula



Clustered Housing next to Riparian Area

- If green space transfer areas are not conserved in a manner consistent with these NCP Cluster Housing Guidelines, density maximums in all Cluster Residential areas may not exceed 1upa for properties adjacent to the ALR boundary, 2 upa for areas within 200 m of the ALR or 4 upa for all other areas.
- Developments should apply specific comprehensive development zone with a base zone containing density dimensional and building form standards most closely comparable to the total approved net density of the cluster development.
- Undevelopable areas such as stream setback areas and utility corridors can be included as green space transfer; however the areas shall be discounted by 50%. (Land area within 5 meters from creek top of bank cannot be included in the density transfer calculation).

E. Density Allocation

- The amount of Green Space preservation required should generally increase with increase in land use and use density, because of the feasibility of protecting open space and to offset the cost of development.
- In lower density cluster designs (near Serpentine River), different techniques such as clustering homes into small groups may be used while in higher density urban areas small lot zoning and multiple family dwellings can be used to intensify development in specific locations such as near roads, on flatter slopes, and away from the Agricultural land reserve or environmentally sensitive features and clumps of established trees.
- The maximum density and minimum area of dedicated open space should meet the requirements outlined in **Table 4.2** below, as per example in **Figure 4.15**.

Green Space Transfer Required for Cluster Designations				
Land Use Designation	Max Base Density (upa)	Green Space Transfer Area (% of <u>developable</u> *)	**Potential Maximum Net Density on developable site area (upa) Low High	
Suburban Cluster	2	15-30%	2.3	3
Cluster Residential	4-6	30-40%	5.5	8.5
Cluster Residential	6-10	35-45%	8.5	14.5
Cluster Residential	10-15	40-50%	15	22.5

**Note: Developable Area and Green Space Transfer Areas do not include Road Right-of-way dedication.*

***Note: If green space transfer areas are not provided for in a manner that is consistent with these NCP Cluster Housing Guidelines, base density maximums in all Cluster Residential areas may not exceed 2 UPA within 200m of ALR or 4 UPA in all other areas.*

Table 4.2 - Green Space Transfer Density Potential Summary for Cluster Residential Areas



Tree Protection Fences in Place during Construction

F. Green Space Area Management

- The boundaries of designated green space areas, recreation areas, rainwater management facilities, and natural areas shall be clearly delineated on plans, including subdivision plans, rezoning plans, and marked in the field with signage during construction approved by the Surrey Planning and Development Department to distinguish these areas from private or common property.

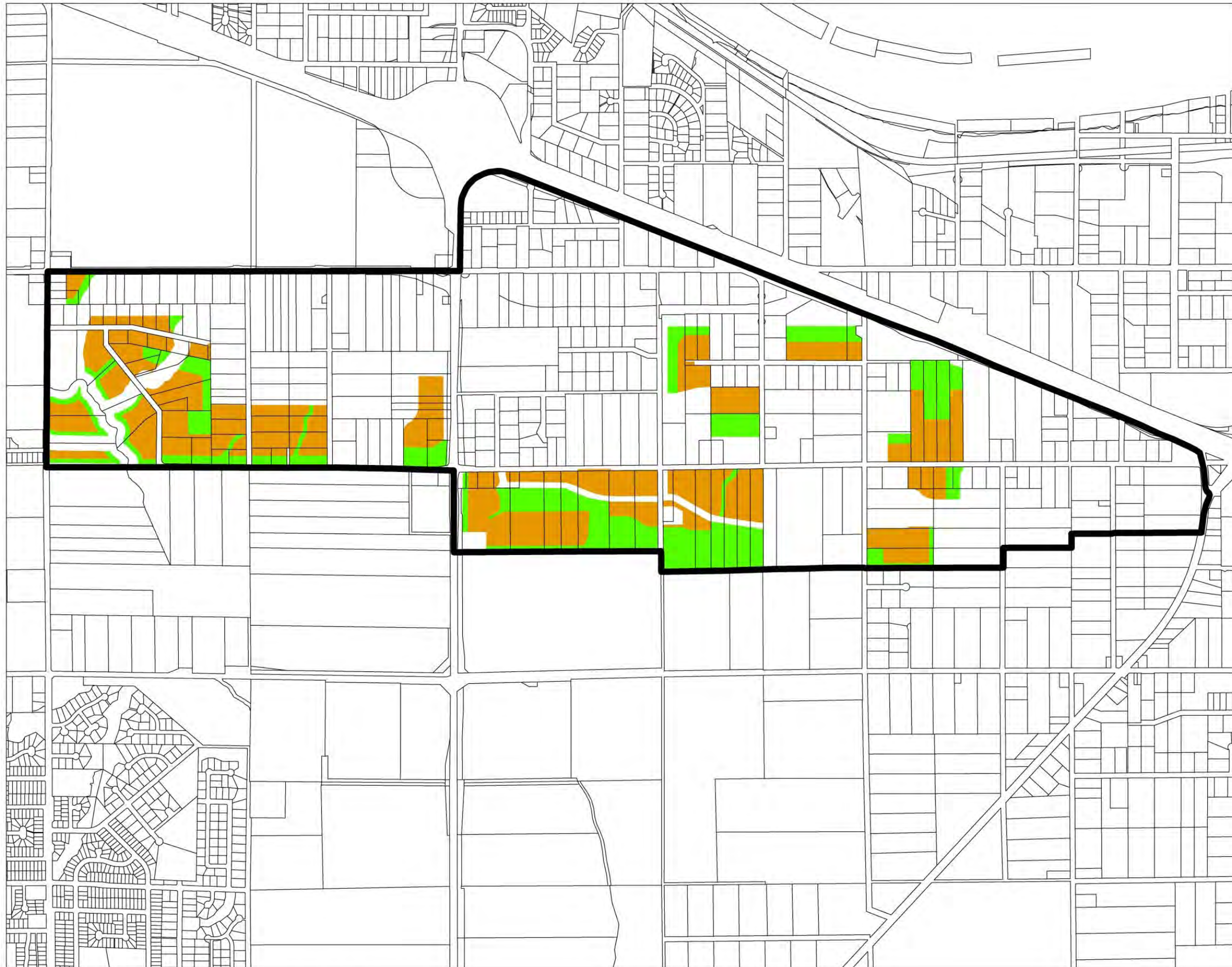
See **Part 4.3** for more details on Green Space Management.



Signage marking environmentally significant areas in place after construction

Legend

- Development Areas (Receiving Sites)
- Green Space Transfer (Sending Sites)
- AnnisdaleTynheadStudyArea



Annisdale-Tynhead NCP
Cluster Housing Areas

The accuracy and completeness of information shown on this drawing is not guaranteed. It will be the responsibility of the user of the information shown on this drawing to locate and establish the precise location of all existing information, whether shown or not.

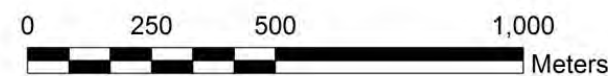


Figure 4.14

Example Site Calculation: Cluster Housing

$$D_{WELLING} U_{NITS} = B_{BASE} D_{DENSITY} [(D_{DEVELOPABLE} A_{AREA} + G_{GREEN} S_{SPACE} + \frac{1}{2} R_{RIPARIAN} + \frac{1}{2} U_{UTILITY})]$$

$$DU = BD [(DA + GS + \frac{1}{2}R + \frac{1}{2}U)]$$

$$DU = 10 \text{ UPA } [(4.5 \text{ Acres} + 2.5 \text{ Acres} + \frac{1}{2} 1.5 \text{ Acres} + \frac{1}{2} 0 \text{ Acres})]$$

$$DU = 10 \text{ UPA } [(7 \text{ Acres} + 0.75 \text{ Acres})]$$

$$DU = 10 \text{ UPA } [(7.75 \text{ Acres})]$$

$$DU = 78 \text{ Units}^{**}$$

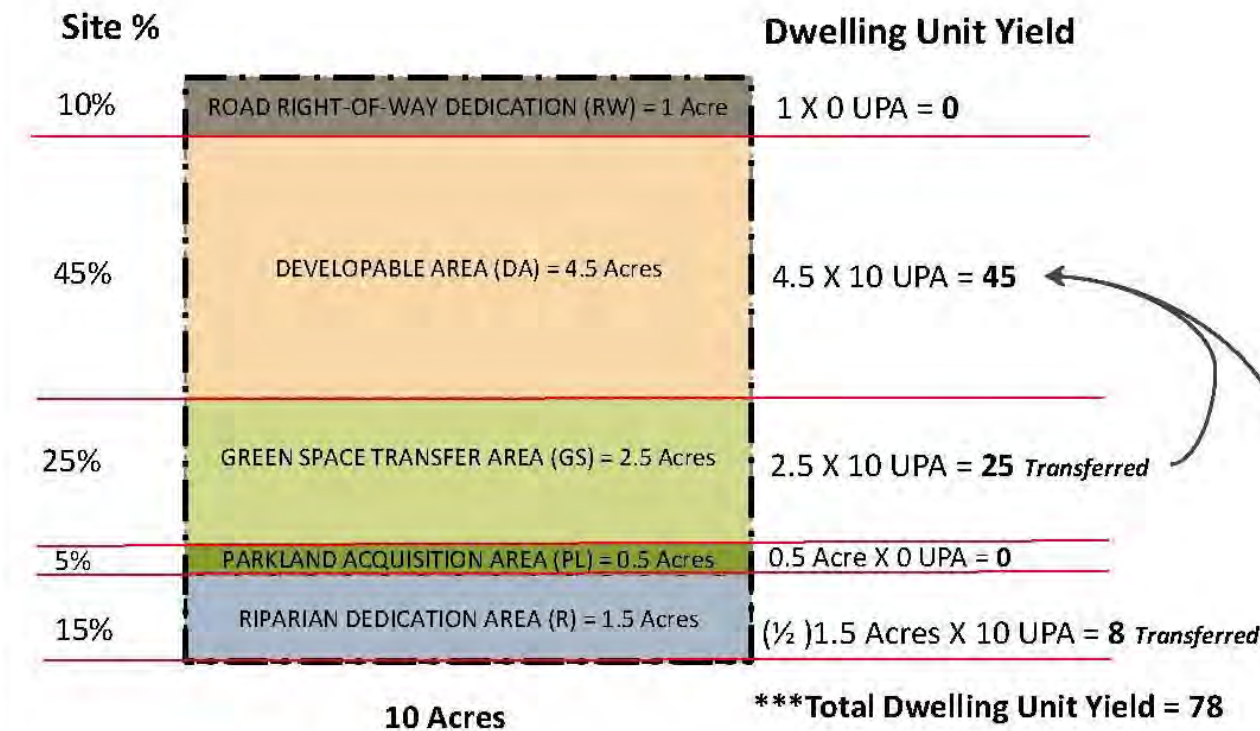
*****Total Potential Dwelling Units = 78 Units**

$$\text{Net Density} = DU/DA$$

$$\text{Net Density} = 78 \text{ Units} / 4.5 \text{ Acres}$$

$$\text{Net Density} = 17.33 \text{ Units Per Acre}$$

$DU = BD[(DA + GS + \frac{1}{2}R + \frac{1}{2}U)]$
Where:
DU = Dwelling Units (Potential)
BD = Base Cluster Density (UPA)
DA = Developable Area (acres)
GS = Green Space Transfer Area (acres)
R = Riparian Setback Area (acres)
U = Utility Corridor (acres)



Example Site Density:

*Base Cluster Density (BD) = 10 Units Per Acre (UPA)

Example Site Statistics:

Developable Area (DA) = 4.5 Acres
 Green Space Transfer Area (GS) = 2.5 Acres
 Riparian Dedication Area (R) = 1.5 Acres
 Utility Corridor (U) = 0 Acres
 Road Right-of-Way = 1 Acre
 Parkland Dedication = 0.5 Acres

TOTAL GROSS SITE AREA = 10 Acres

* Cluster Density vary based on Cluster Designation Density shown in the Anniedale-Tynehead Land Use Plan.

** Units rounded to the nearest whole number.

*** Total Dwelling Unit Potential may be limited by site constraints, and are not guaranteed.

Anniedale-Tynehead NCP Cluster Housing Dwelling Unit Calculation Example

Figure 4.15

4.5 HERITAGE AREA GUIDELINES

Historic Context

The South Port Kells area, occupied in pre-Contact time by the Katzie and Semiahmoo First Nations, contains three distinct sub-communities from the post-Contact area: Port Kells, Anniedale and Tynehead.

The Tynehead and Anniedale areas were among the first in Surrey to be settled by European settlers. In the early 1860s, the three Bothwell brothers pre-empted land along the Coast Meridian Road (168th Street) near the headwaters of the Serpentine River. Access was originally provided by water transportation. The first commercial logging in the area was undertaken by the Royal City Mills in 1864, and logging continued to be a primary industry for a number of years. Temporary rail spurs (known as ‘shooflies’) were laid to facilitate the transportation of logs to market. Settlement occurred as logging and fishing developed in the area, but as the logs were depleted, agriculture became increasingly important, and ultimately became the predominant use.

The area has remained largely a rural community, dominated by small agricultural pursuits and subsistence farming, and its heritage value is found in its response to those conditions. Additionally, logging was important in the early development of the area, and determined the location of a number of heritage resources. Early transportation routes crisscross and are evident throughout the area.

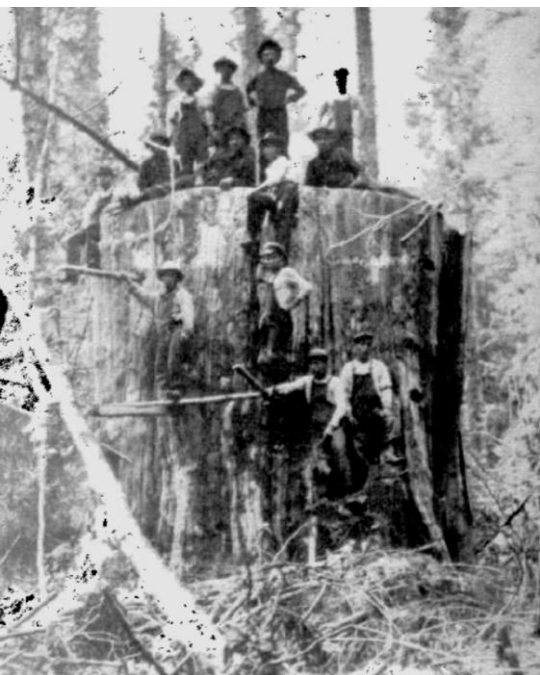
Heritage Resources

The history of the Anniedale-Tynehead Area of South Port Kells is reflected in small buildings on large properties often supplemented by out-buildings, such as barns, sheds, garages, stables, and other agricultural structures. The architecture may be more modest than in other parts of the City because of the rural setting; however, the evaluation of architectural merit has been scaled to the area’s means and resources.

Many sites have mature trees and plantings, which contribute to the significance of siting and landscaping. Additionally, some sites have remnants of fields and orchards with mature fruit trees. As the area was primarily agricultural, the settings for the buildings have been culturally modified. Therefore the physical heritage of the area is as important as its built heritage in understanding its settlement, growth and development.



Mill east of Pike Road on Townline Ave
Tynehead Memories



Stump near Maple Leaf Mill in Tynehead
Tynehead Memories

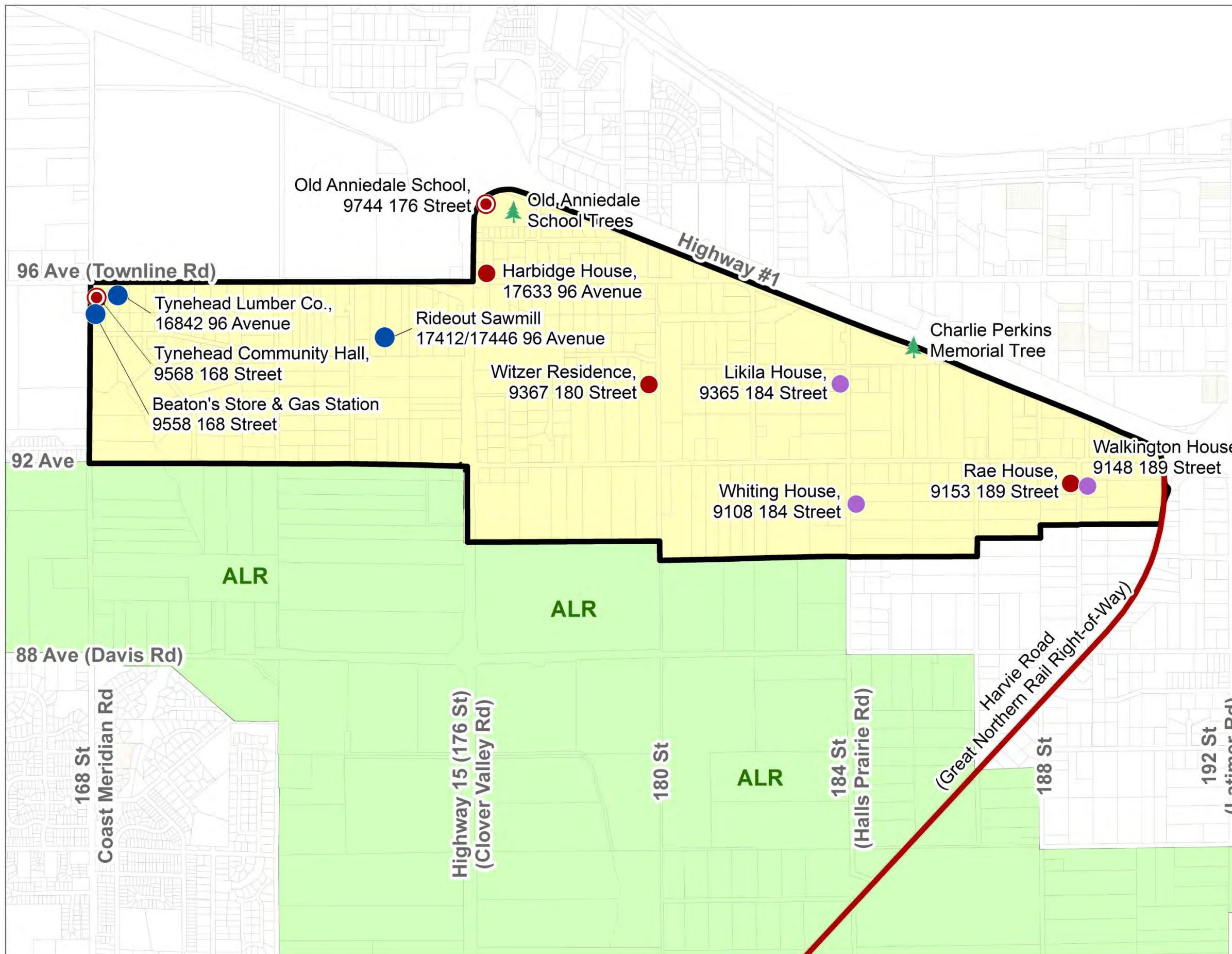


Historic Buildings and Sites

There are a number of historic buildings and sites that have been determined to have recognizable heritage significance through the Heritage Register evaluation process (**Figure 4.16**). These are the sites that are considered to have the greatest heritage value, and should be the primary focus for heritage conservation efforts.



- I. Old Anniedale School (9744 176 Street) and Tynehead Community Hall (9568 168 Street) are listed on the Surrey Heritage Register and individually protected by Heritage Designation By-law.
- II. Harvie Road is listed on the Surrey Heritage Register but does not have any formal heritage protection.
- III. Two buildings/sites are proposed for addition to the Surrey Heritage Register:
 - Rae House (9153 189 Street)
 - Harbidge House (17633 96 Avenue)
 - Witzer Residence (9367 180 Street)
- IV. A number of additional buildings/sites may or may not possess sufficient individual value to merit addition to the Surrey Heritage Register; however, they do contribute to the character and ambience of the area. These include:
 - Whiting House (9108 184 Street)
 - Likila House (9365 184 Street)
 - Walkington House (9148 189 Street)
- V. A number of trees have been listed on the City's List of Significant Trees ("Schedule B" of the Tree Preservation Bylaw), several of which have been determined to possess heritage value. In Anniedale-Tynehead, the following trees have been recognized:
 - Various trees (9744 176 Street)
 - Memorial Tree (184 Street and Highway #1)



Legend

- Registered and Protected Heritage Site
- Site to be added to Heritage Register
- Registered Heritage Route
- Sites with Potential Heritage Value
- Commemorations Opportunities
- Significant Trees

Anniedale-Tynehead NCP
Heritage Opportunities

The accuracy and completeness of information shown on this drawing is not guaranteed. It will be the responsibility of the user of the information shown on this drawing to locate and establish the precise location of all existing information, whether shown or not.



Figure 4.16



Protected by Heritage Revitalization Agreement By-law, 1999, No. 13859



Boothroyd House (16811 60 Avenue)
Protected by Heritage Revitalization Agreement By-law, 2004, No. 15233



Example: Heritage Interpretation

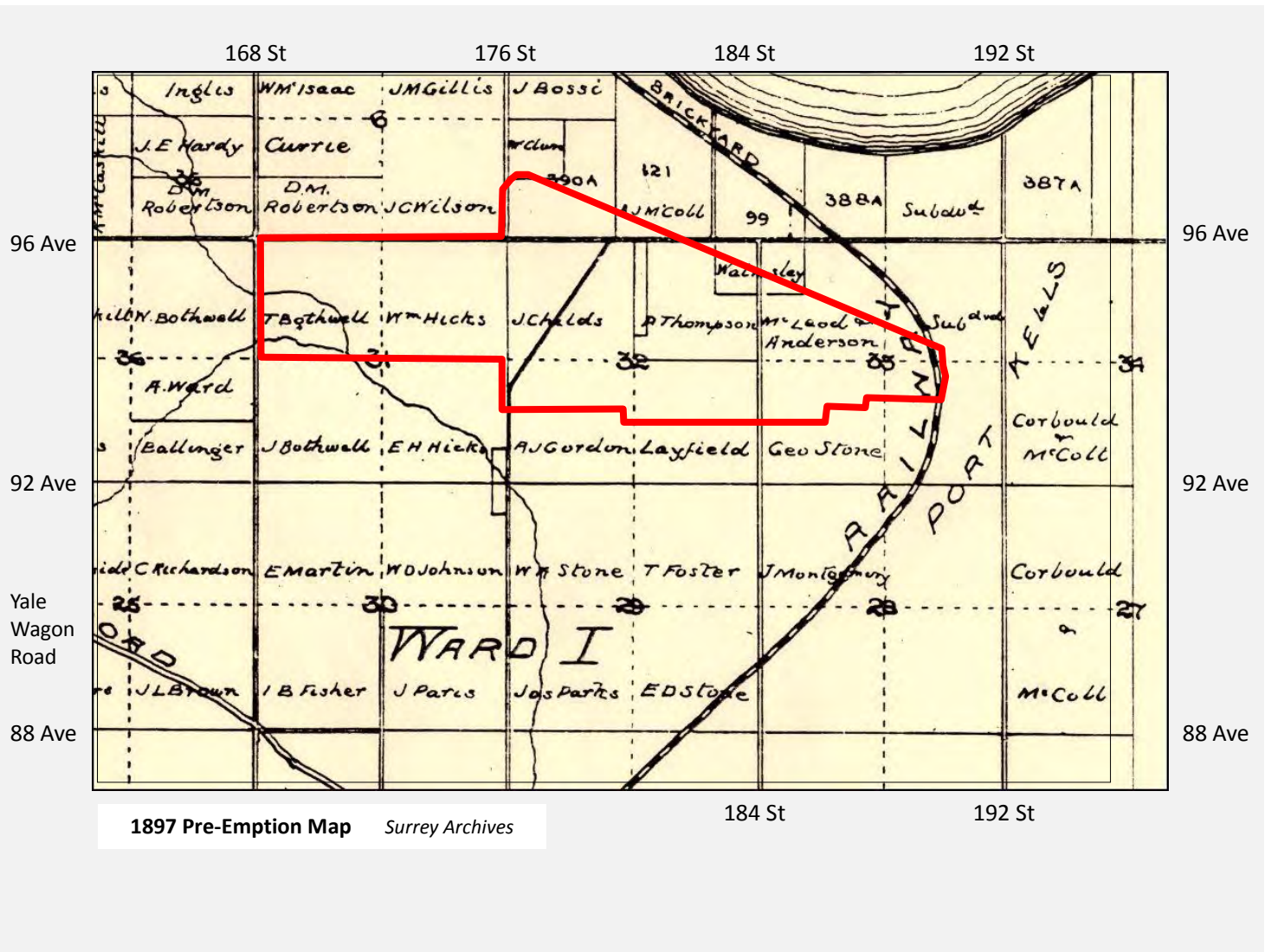


Heritage Policy Objectives

The redevelopment of Anniedale-Tynehead will constitute a major change to the built heritage and historic low density, character of the area. In order to maintain a sense of context within the restoration and revitalization of the historic structures, a programme of conservation, commemoration, documentation, and interpretation should be considered in conjunction with the buildings, sites, and features being preserved.

Heritage conservation, interpretation and commemoration strategies should include:

- The establishment of the “Tynehead Heritage Village Commercial Area Precinct” (168 and 96 Avenue) with special design guidelines.
- The preservation of registered heritage buildings/sites and buildings/sites recommended for addition to the Surrey Heritage Register. Development on these sites should not occur until the protection and restoration of each of the buildings is secured in a manner satisfactory to the City (e.g., heritage revitalization agreement). These buildings are intended to remain in private ownership with an adaptive use that respects the heritage value and encourages a viable future;
- As opportunity permits, the preservation of additional buildings/sites that have not yet been proposed for addition to the Surrey Heritage Register;
- Encouraging the preservation of heritage buildings/sites through variations in density, use, siting and other regulations via heritage revitalization agreements or other tools provided in the Local Government Act;
- Ensuring that new construction adjacent to heritage buildings/sites is sensitive to the historic context and design of existing heritage buildings;
- Encouraging publicly accessible interpretation about the values associated with existing heritage resources in the area, First Nations history, pioneering families, and historic street names;
- Encouraging the commemoration of the two historic mill sites in the area;
- Requiring the documentation and interpretive commemoration of demolished heritage buildings;

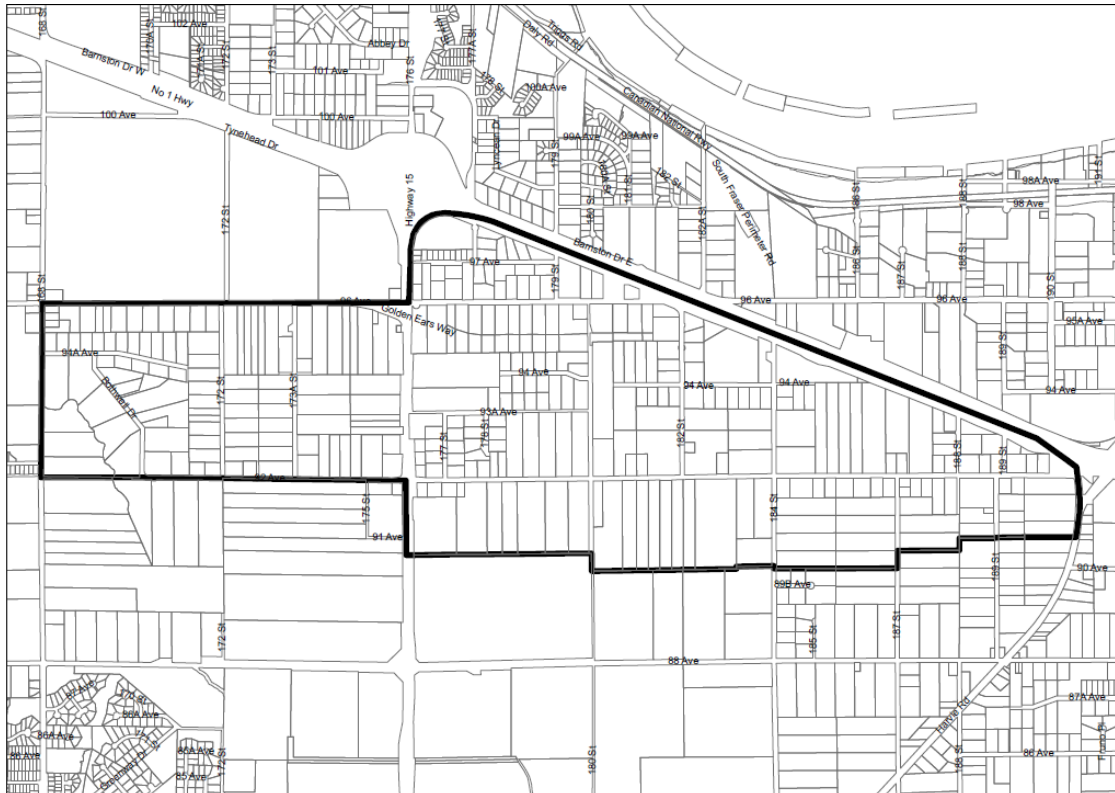


Proposed Amendment to Schedule F and G of the Zoning By-law

**Proposed Amendments to
Surrey Zoning By-law, 1993, No. 12000, as amended**

The following amendments are proposed to Surrey Zoning By-law, 1993, No. 12000, as amended:

- Schedule F – Map of Neighbourhood Concept Plan and Infill Areas is amended by inserting Map 27 - Area XXVII for Anniedale-Tynehead, as follows:



- Schedule G - Amenity Requirements in Neighbourhood Concept Plan (NCP) and Infill Areas is amended by inserting a new Item 27 after Item 26, as follows:

NCP and Infill Areas		Amenity	Contributions Per Dwelling Unit	Contributions For All Other Land Uses
27.	Area XXVII on Schedule F of this By-law	Parks and Pathways Development Library materials Fire Protection Police Protection	\$1,294.91 \$141.15 \$271.01 \$62.74	N/A N/A \$1,084.07 per acre \$250.90 per acre
		<i>Total Amenity Contributions</i>	\$1,769.81	\$1,304.96 per acre

**Proposed Amendments to
Surrey Land Use and Development Application Fees Imposition By-law, 1993, No. 11631**

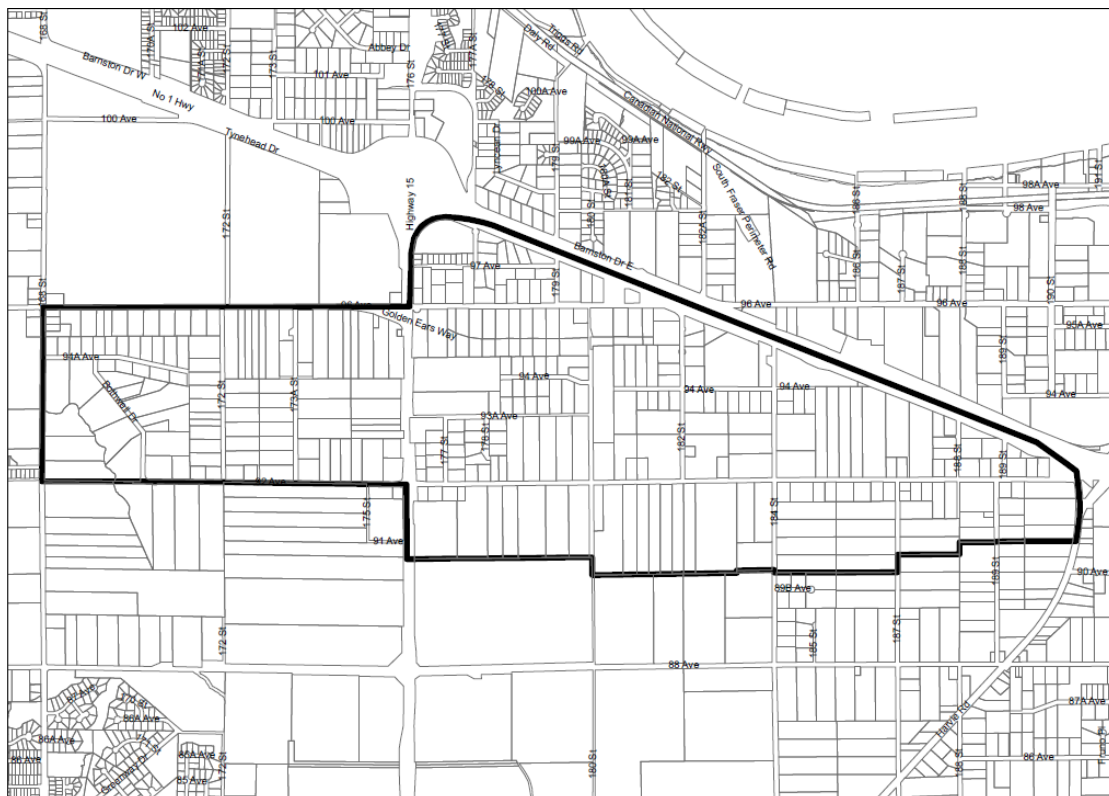
The following amendments are proposed to Surrey Land Use and Development Application Fees Imposition By-law, 1993, No. 11631:

1. Amend Schedule Eight (8) - Application Surcharge Fees Within Neighbourhood Concept Plan Areas and Infill Areas, as follows:

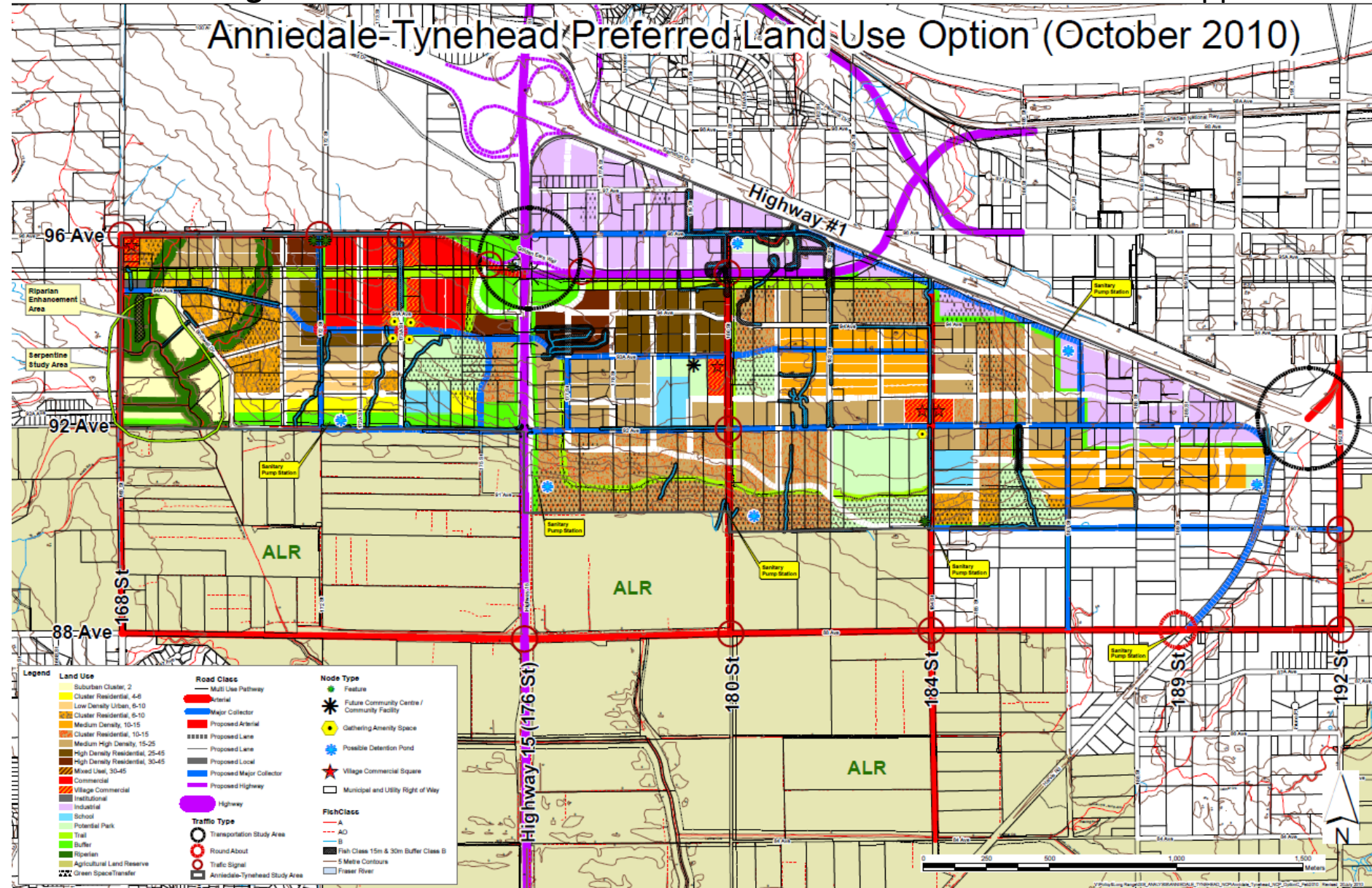
- (a) Insert the following in the table, after item number 11:

(12) Anniedale-Tynehead Neighbourhood Concept Plan as shown on Map 12	\$86.46 per lot or dwelling unit (or equivalent) calculated on the maximum number of lots or dwelling units allowable on the site after the zoning amendment is granted.
---	--

- (b) Insert the following figure as Map No. 12, following Map No. 11 and insert "Map No. 12 Anniedale-Tynehead Neighbourhood Concept Plan Lands Subject to Surcharge" as the title at the bottom of the left-hand corner of Map No. 12.



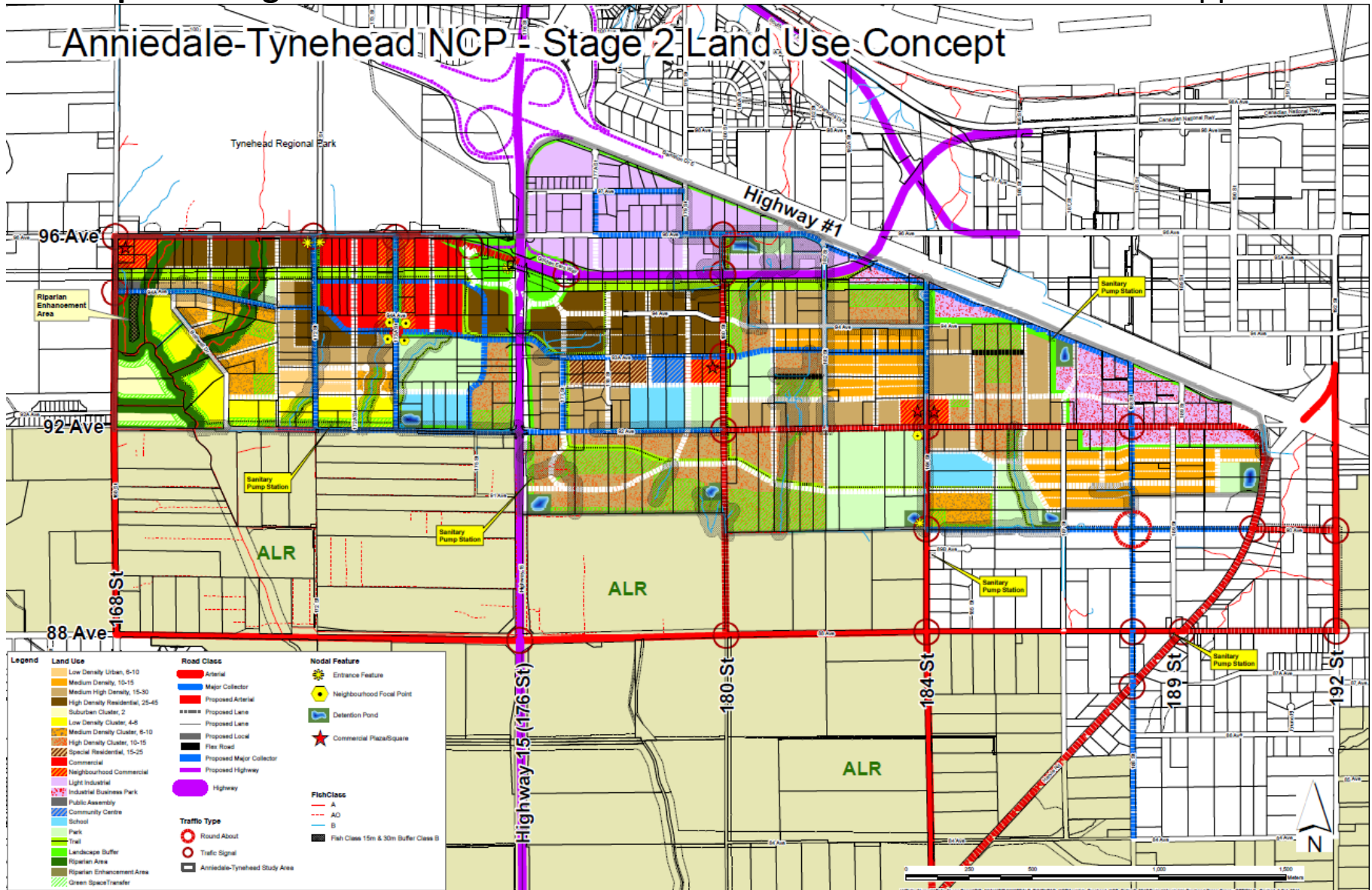
Anniedale-Tynehead Preferred Land Use Option (October 2010)



Land Use	Road Class	Node Type	Feature
Suburban Cluster, 2	Multi Use Pathway	Feature	Future Community Centre / Community Facility
Cluster Residential, 4-6	Arterial	Future Community Centre / Community Facility	Gathering Amenity Space
Low Density Urban, 8-10	Major Collector	Possible Detention Pond	Village Commercial Square
Cluster Residential, 8-10	Proposed Arterial	Star	Municipal end Utility Right of Way
Medium Density, 10-15	Proposed Lane	Star	Fish Class
Cluster Residential, 10-15	Proposed Lane	Star	Fish Class 15m & 30m Buffer Class B
Medium High Density, 15-25	Proposed Local	Star	5 Metre Contours
High Density Residential, 25-45	Proposed Major Collector	Star	Fisher River
High Density Residential, 30-45	Proposed Highway	Star	
Mixed Use, 30-45	Highway	Star	
Commercial		Star	
Institutional		Star	
School		Star	
Potential Park		Star	
Trail		Star	
Buffer		Star	
Riparian		Star	
Agricultural Land Reserve		Star	
Green Space/Transfer		Star	
	Traffic Type		
	Transportation Study Area		
	Round About		
	Traffic Signal		
	Anniedale-Tynehead Study Area		



Anniedale-Tynehead NCP - Stage 2 Land Use Concept

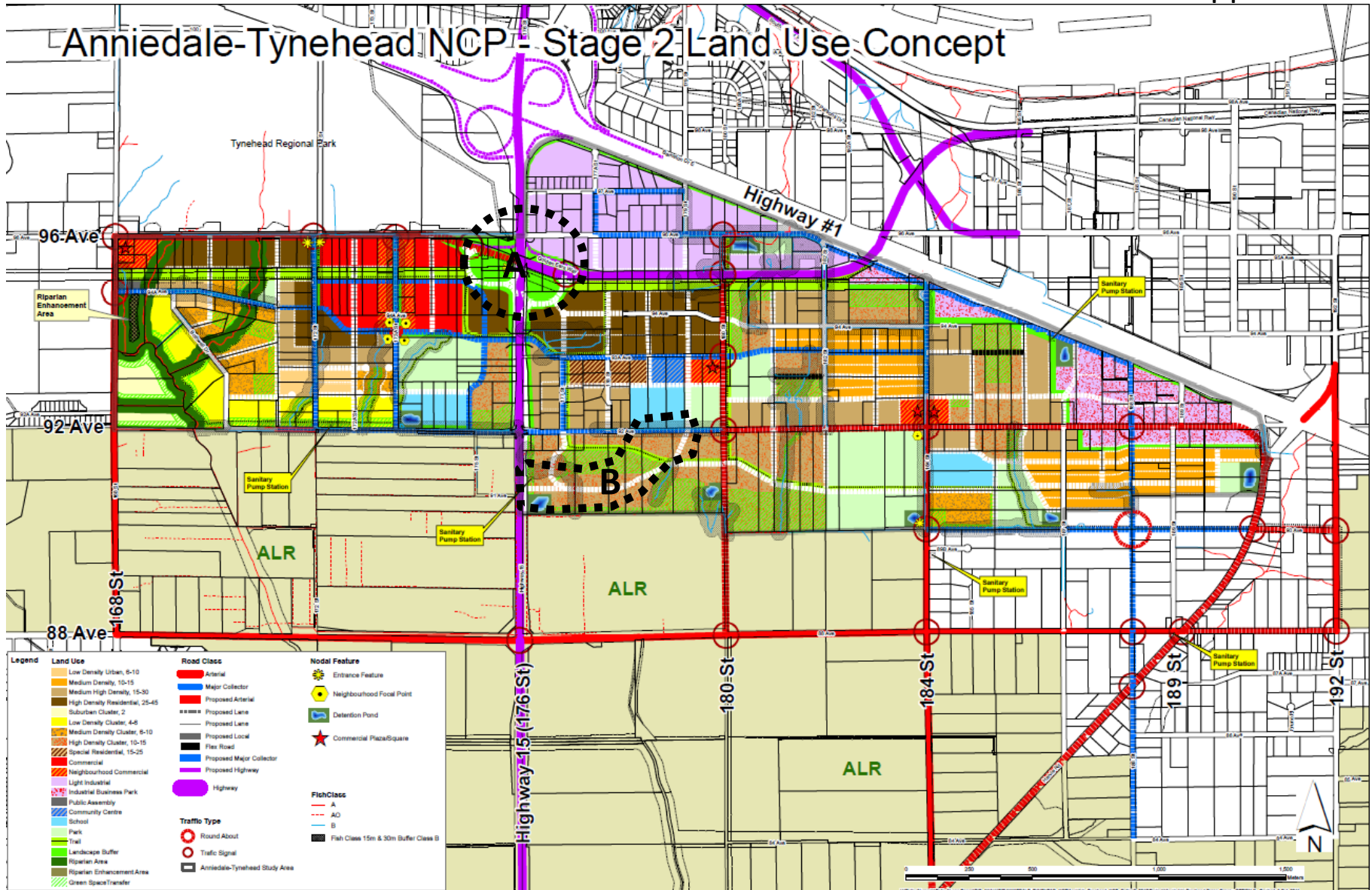


Legend	
	Low Density Urban, 5-10
	Medium Density, 10-15
	Medium High Density, 15-30
	High Density Residential, 25-45
	Suburban Cluster, 2
	Low Density Cluster, 4-8
	Medium Density Cluster, 6-10
	High Density Cluster, 10-15
	Special Residential, 15-25
	Commercial
	Neighbourhood Commercial
	Light Industrial
	Industrial Business Park
	Public Assembly
	Community Centre
	School
	Park
	Trial
	Landscape Buffer
	Riparian Area
	Riparian Enhancement Area
	Green Space Transfer
	Arterial
	Major Collector
	Proposed Arterial
	Proposed Major Collector
	Proposed Lane
	Proposed Lane
	Proposed Local
	Proposed Local
	Proposed Major Collector
	Proposed Major Collector
	Proposed Highway
	Proposed Highway
	Highway
	Round About
	Traffic Signal
	Anniedale-Tynehead Study Area
	Entrance Feature
	Neighbourhood Focal Point
	Detention Pond
	Commercial Plaza/Square
	Fish Class A
	Fish Class AO
	Fish Class B
	Fish Class 15m & 30m Buffer Class B

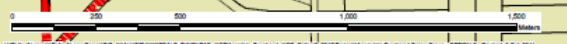


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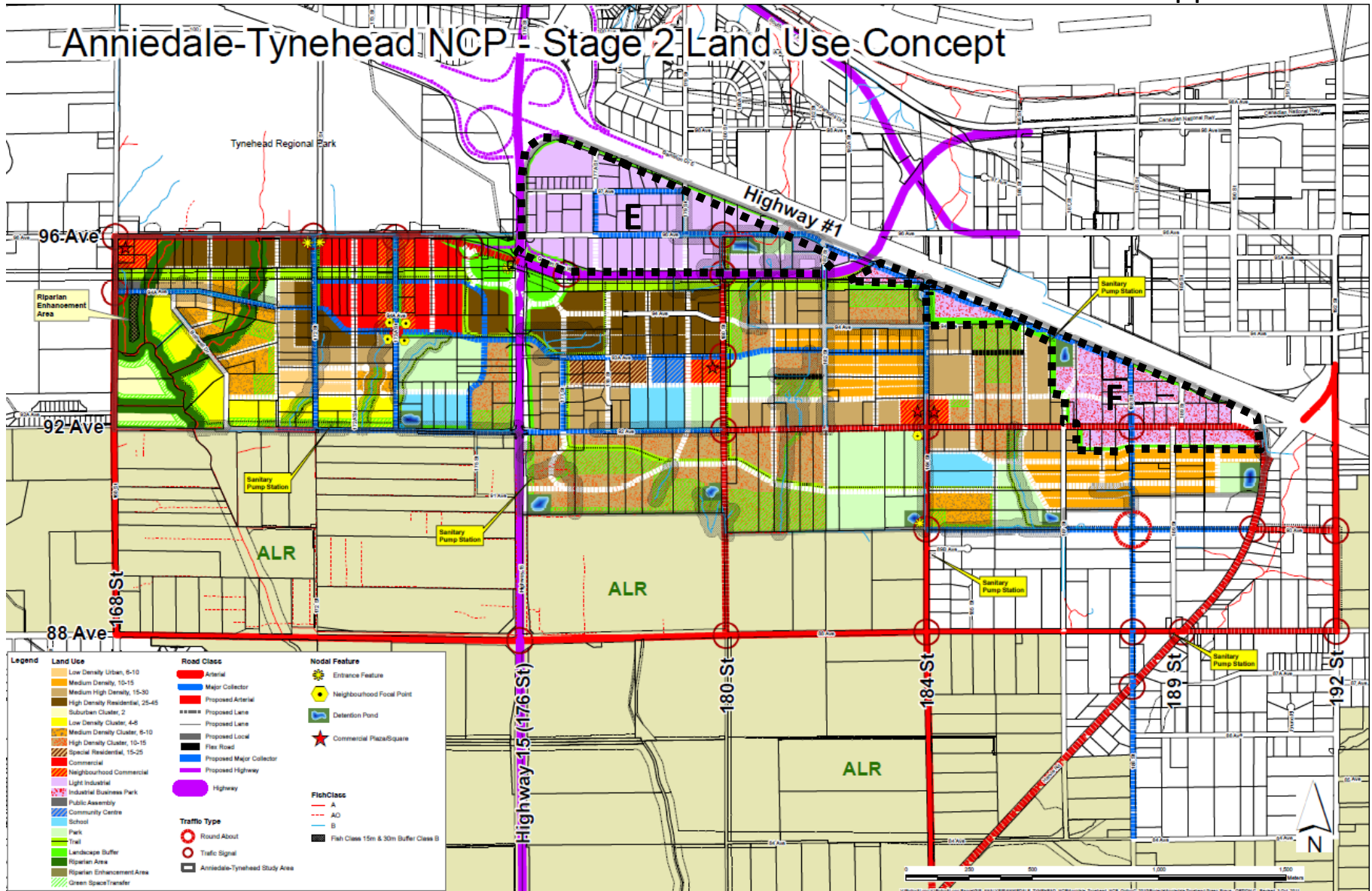
Anniedale-Tynehead NCP - Stage 2 Land Use Concept



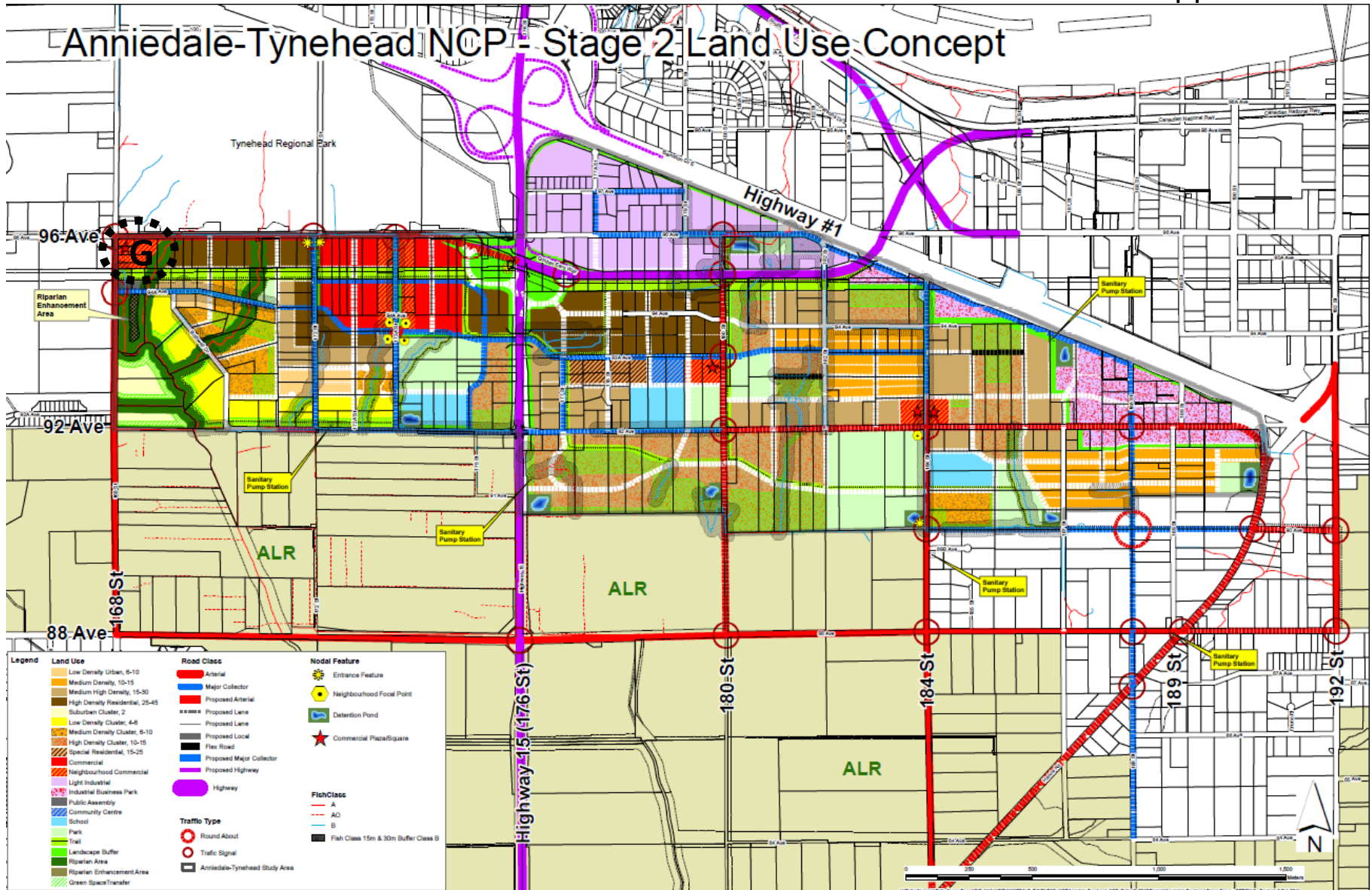
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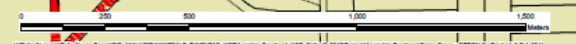
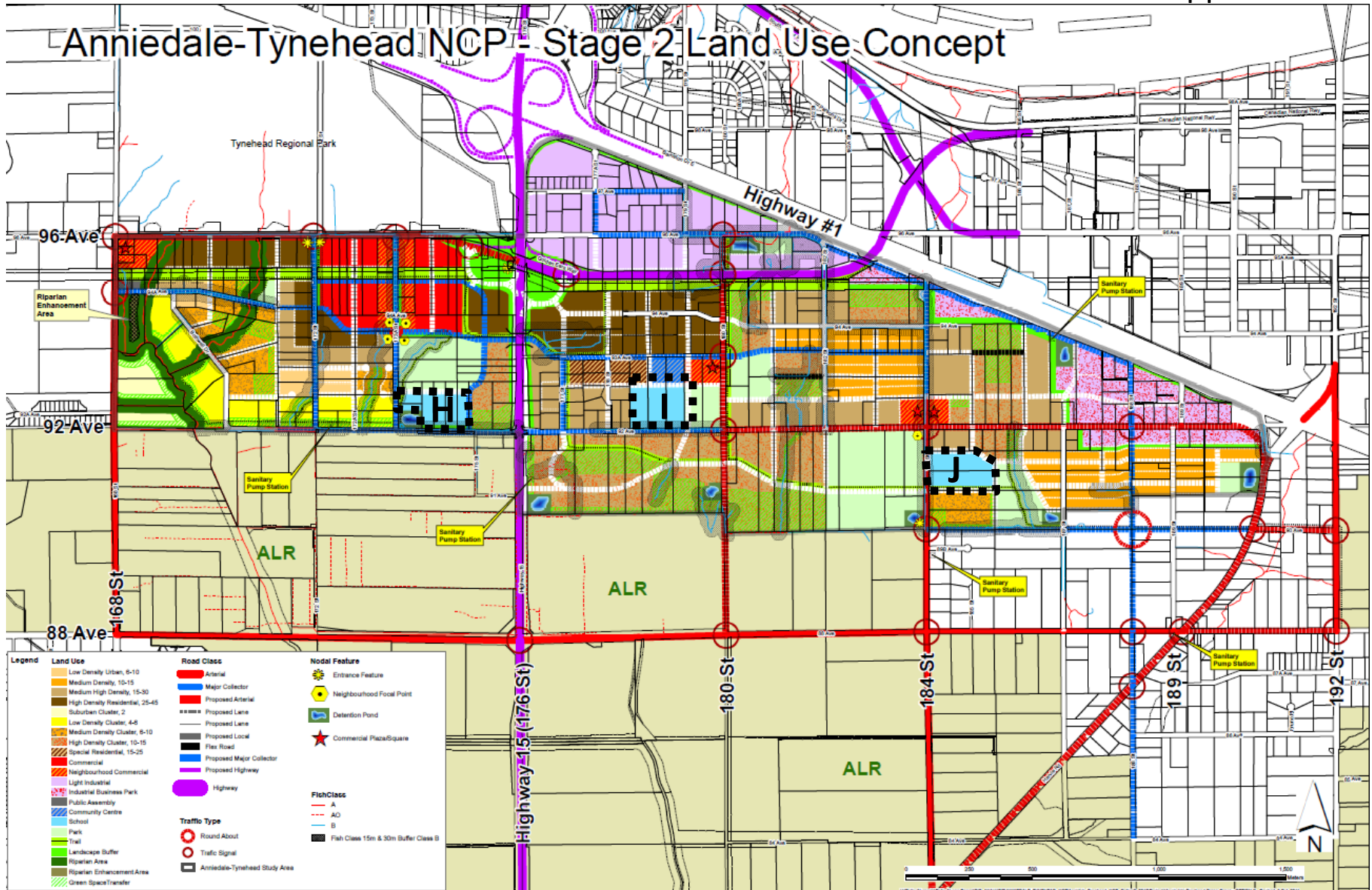
Anniedale-Tynehead NCP - Stage 2 Land Use Concept



Anniedale-Tynehead NCP - Stage 2 Land Use Concept

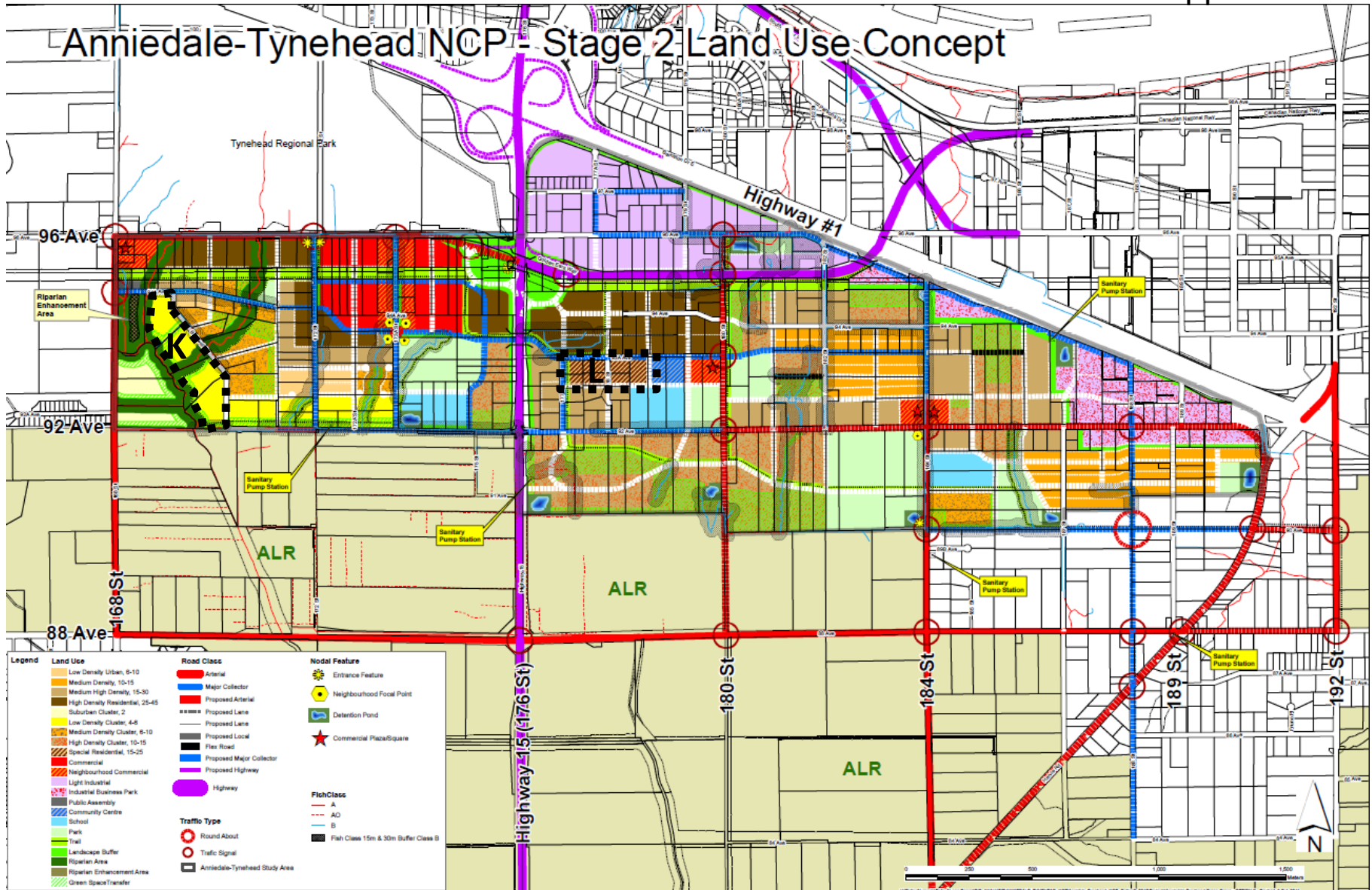


Anniedale-Tynehead NCP - Stage 2 Land Use Concept

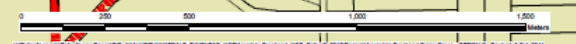


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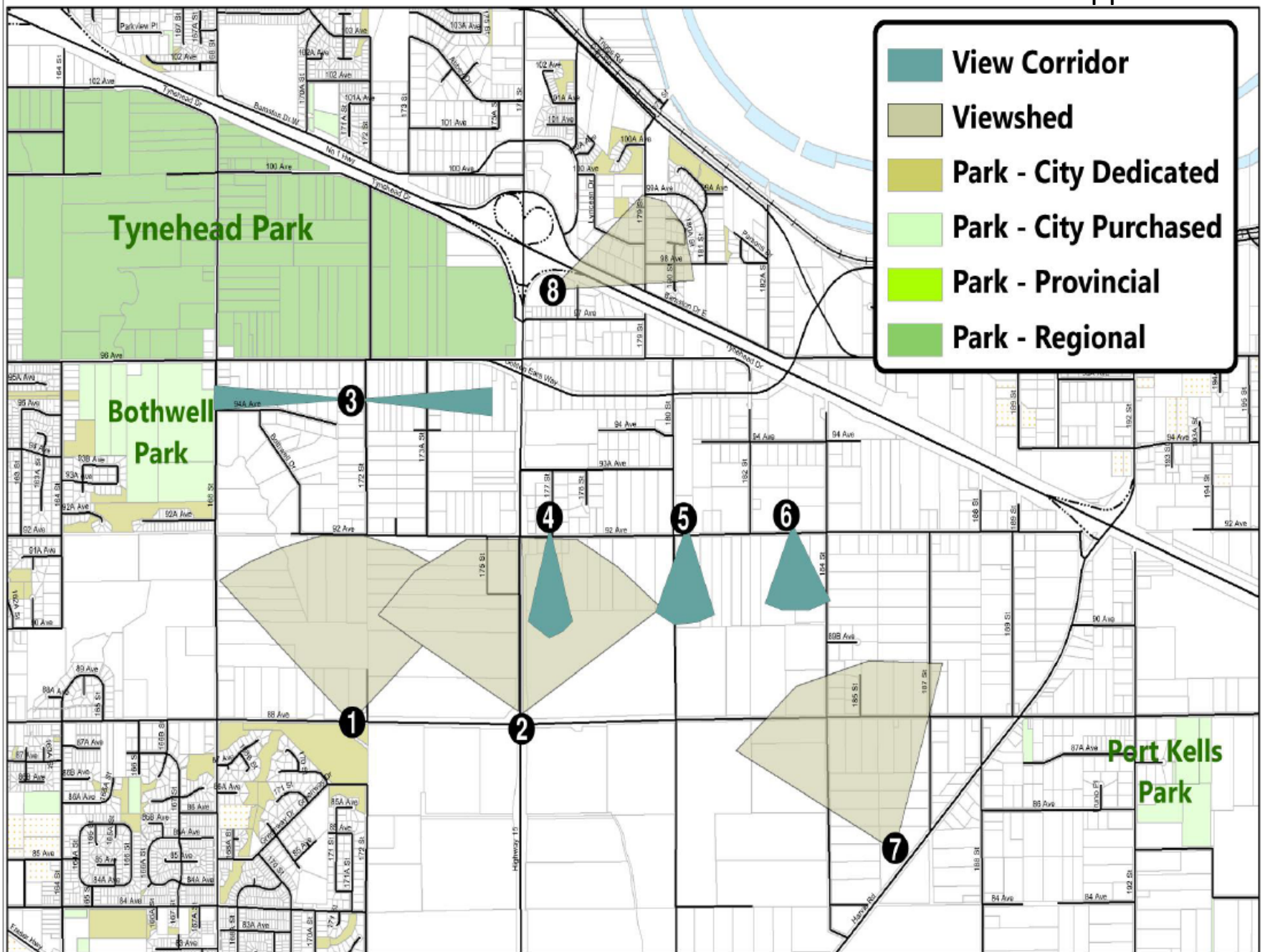
Anniedale-Tynehead NCP - Stage 2 Land Use Concept



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Examples of the Lumber and Industry Themes Used in Architecture and Public Realm



Teaching and Laboratory Building to house the Medical Sciences Faculty at UNBC features wood design.



Use of saw blade design in tree grate,
Coal Harbour, Vancouver, BC.



The Vancouver Convention Centre's West Building with interior wood design



Use of Band Saw in Ceiling Treatment,
2002 Buster Simpson, *Mobius Band*,
Environmental Learning Center,
Bainbridge Island, WA

Summary of Land Use Statistics

Land Use	Acres	Projected Units (Low)	Projected Unit (High)	Projected Population (Low)	Projected Population (High)	Projected Employment
Road Way	250.1	0	0	0	0	0
Landscape Buffer	42.8	0	0	0	0	0
Multi-Use Trail	44.0	0	0	0	0	0
Riparian Reserve	31.7	0	0	0	0	0
Park	78.4	0	0	0	0	0
School	14.7	0	0	0	0	84
Community Centre	2.9	0	0	0	0	38
Public Assembly	0.7	0	0	0	0	3
Commercial	24.1	0	0	0	0	997
Neighbourhood Commercial	16.6	0	0	0	0	942
Light Industrial	73.6	0	0	0	0	2,465
Industrial Business Park	41.0	0	0	0	0	2,163
Suburban Cluster Residential	7.4	15	15	48	48	0
Low Density Residential	5.4	33	54	101	168	0
Low Density Cluster Residential	23.9	96	144	296	445	0
Medium Density Cluster Residential	35.0	210	350	650	1,083	0
High Density Cluster Residential	136.8	1,368	2,052	4,232	6,348	0
Medium Density	48.0	480	720	1,485	2,227	0
Medium-High Density	74.8	1,123	1,871	3,473	5,789	0
High Density Residential	53.4	1,419	2,403	3,038	5,144	0
Special Residential	6.3	94	157	201	336	0
Total	1,011.6	4,836	7,765	13,525	21,588	6,691