

Township
of Langley

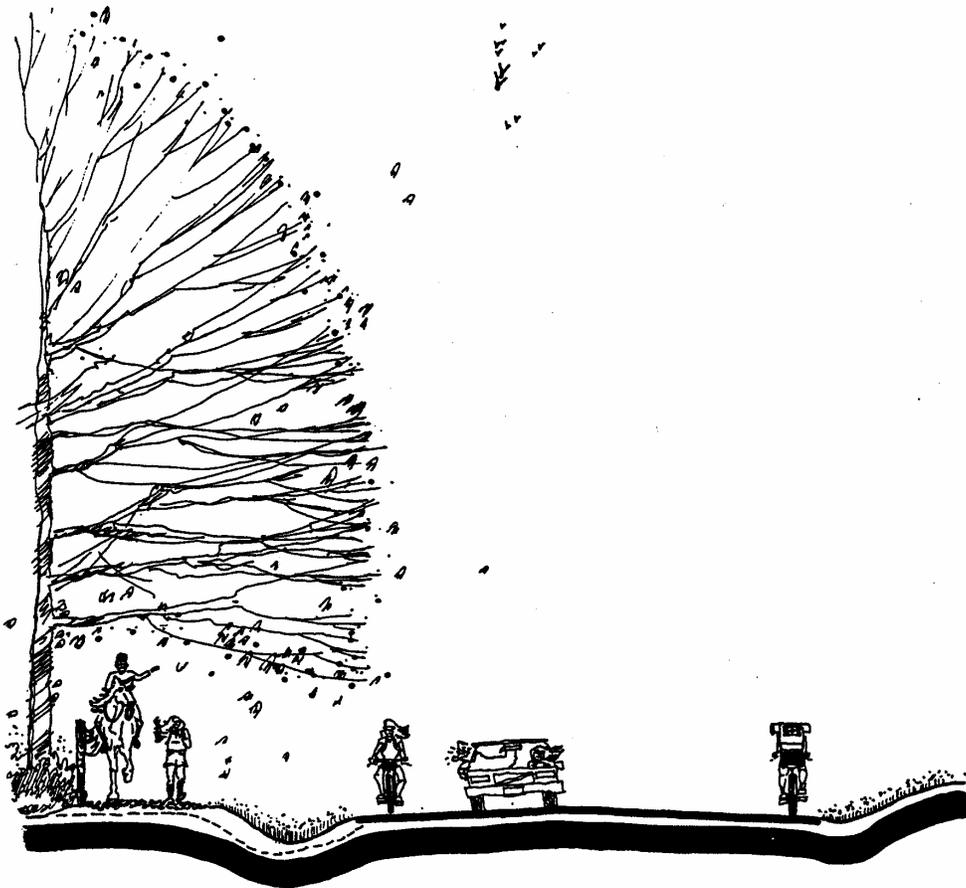


Est. 1873

Discover
Active Living

thru Community Connections

Planning Document for a Municipal Trail Network



JULY 1994

Adopted by Council on September 26, 1994.

Acknowledgements

This document would not have been possible, let alone practical, without the efforts of a great many dedicated and energetic volunteers and staff. The volunteers are listed below according to the area team with which they worked:

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Executive Summary

Langley Township supports the pursuit of an "Active Living" community - a community dedicated to working with its residents to create a range of opportunities for an active lifestyle. The pursuit of "Active Living" is an individual choice, which can include creative endeavors, cultural expression, personal development, physical activity and social interaction. Successful "Active Living" initiatives are for all ages and abilities through the co-operative efforts of community members.

The "Community Connections" process is an important vehicle for Langley residents to discover "Active Living". Specifically, "Community Connections" is the name given to the planning, design and implementation process for a municipal trail network because of the inherent opportunities to connect between individuals, neighbourhoods, communities and municipalities. It also recognizes the importance of connecting residents with the environment and our heritage resources. In the true spirit of "Active Living", this initiative was made possible through the collaboration between many community members, all municipal departments, the R.C.M.P., the School District, and GVRD Parks.

"Community Connections" evolved out of the Langley Tomorrow Program. Through this highly public process, residents indicated the use of parks and trails as one their most popular recreation activities. As a result of Council's desire to respond to the interest in trails, provisions for planning a municipal trail system were included in the 1992 Corporate Work Program.

The plan is unique because it is community based. It stresses creative funding and implementation strategies, and encourages the trails to be used as a venue for a variety of leisure pursuits. The trail guidelines are intended to accommodate a range of ages and abilities.

The Community Connections Network will provide for trails that are:

- ◆ Safe, accessible, enjoyable and convenient for equestrian, pedestrian, wheelchair, bicyclist and other non-vehicular users, founded on a balanced consideration of principles related to engineering, education, environment, enforcement and encouragement.
- ◆ Oriented to the transportation and recreation functions for a broad range of local and regional interests, considering non-vehicular users of all ages and all abilities.
- ◆ Implemented in a cost effective manner, considering a responsive balance between users, needs, costs, benefits and ongoing responsibilities.
- ◆ A community oriented partnership process from planning through implementation with methodology and rationale documented in a reference report for ongoing trail planning, management and community review.
- ◆ Coordinated with adjacent jurisdictions, land users, land owners, ongoing developments, current capital programs, users and non-users, including impact evaluation criteria such that the communities are enhanced.
- ◆ Inclusive of as much of the Township as practical, connecting within and between communities and other destinations.
- ◆ Initiated with pilot trail projects that can be used to review trail planning, design and operation concepts for use in future trail development.

The preparation of a Community Connections Trail Network Plan has placed a strong emphasis on public involvement. Facilitated by a staff team, the public provided the foundation for the plan through a series of workshops held in May 1992. From the workshops, three community teams of interested volunteers and staff have worked on refining the process and product. A draft Community Connections Trail Network Plan was presented to Council in March 1994. As part of the 1993 Capital Program, sections of trail along existing corridors are being constructed as a demonstration of proposed trail guidelines.

The recommendations from the plan document are listed below without discussion. The report provides the background and rationale for each recommendation.

Planning Process

1. That the Community Connection staff team continue to coordinate the planning process and monitor the Plan's progress.
2. That a development work team continue to facilitate current trail development opportunities.
3. That the community teams from each of the 3 geographic areas continue to meet on a regular basis to provide input into trail development.
4. That the community teams will host open houses for the public to review specific trail designs in their neighbourhoods as part of the trail planning process.
5. That a Trails Coordinator continue the trails implementation phase as outlined in Section Two of the Community Connections Planning Document for a Municipal Trails Network.

Vision

6. That the Mission Statement, Definitions and Objectives of the Community Connections: Planning Document for a Municipal Trail Network be adopted.
7. That the conceptual trail network plan shown in Figure Four of the Community Connections: Planning Document for a Municipal Trail Network be approved as the basis for future trail network planning in the Township.
8. That the bicycle route plan shown in Figure Five of the Community Connections: Planning Document for a Municipal Trail Network be approved as the basis for future bicycle route planning in the Township.
9. That all community plans and neighbourhood control plans, identify alignments for trail routes indicated on the conceptual trail route plan of the Community Connections: Planning Document for a Municipal Trail Network and that these trails be protected through the rezoning, subdivision and development application process where possible.

Engineering

10. That the Trail Design Guidelines be adopted at the Township Trail Design Guidelines.
11. That the Corporation's Subdivision and Development Control Bylaw be reviewed to incorporate trail requirements.
12. That a signage concept be developed as a guideline for all trail signs, including appropriate engineering standards and features outlined in the Langley Corporate Identity Manual.
13. That a trail inspection and maintenance policy be developed and implemented.
14. That a "SPOT" improvement program be implemented to provide ongoing monitoring of trail conditions and to coordinate maintenance programs.

Education

15. That Parks and Recreation Services identify leisure programming goals for the municipal trails network.
16. That Parks and Recreation Services review leisure programming opportunities associated with the municipal trails network and recommend specific clubs, associations, agencies or outside agencies to coordinate and monitor the various initiatives in the short, medium, long terms.
17. That as part of the interagency program coordinating initiative, the Parks and Recreation Services Division work with outside agencies to identify leisure programming opportunities for outside agencies to provide and encourage the implementation of such programs.
18. That the Trails Coordinator investigate appropriate clubs, organizations, and public service agencies to provide education for users and potential users on safety and proper conduct by all types of users.

Encouragement

19. That a staff team design and publish a developer's guide and a series of trail brochures for each user category.
20. That the 1993 Budget allotment for the public education component "Community Connections" be acknowledged as seed money and future budgets include provisions to publish additional brochures or revisions to existing brochures.
21. That all communication methods be considered to inform the public of municipal trails initiatives.
22. That end-of-trip facilities be considered where feasible, in budgeting for new trails or trail enhancements.

Enforcement, Safety and Liability

23. That the Township continue to adopt policies, design guidelines and construction, inspection and maintenance standards for trails that provide a reasonable balance between costs to the Township and level of service for the users.
24. That the Township's trail guidelines be reviewed and updated on a regular basis to promote consistency with other trail guidelines within the region; the first review to be done in 1998.
25. That the staff team investigate the establishment of a Volunteers-in-Parks (VIP) Program.
26. That the Community Connections Courtesy Code be adopted and incorporated into trail signage and brochures.

Environment

27. That trail planning considerations include vistas, cultural features, environmentally sensitive areas and interpretive signage.
28. That, subject to provincial and federal regulations, wherever a trail is proposed and an Agricultural Land Reserve (ALR) and/or stream crossing is involved, damage to habitat shall be minimized and replacement and enhancement shall be implemented.

Implementation

29. That Phase I of the trails work program of the Community Connections: Planning Document for a Municipal Trail Network be supported.
30. That the staff team and Trails Coordinator perform annual reviews of the work program and report to Council annually on the status of actions required to implement each recommendation of the Community Connections: Planning Document for a Municipal Trail Network.
31. That a staff team and Trails Coordinator monitor and report to Council as needed on a recommended implementation strategy for the remaining phases of the Community Connections: Planning Document for a Municipal Trail Network.

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Est. 1873



thru Community Connections

Planning Document for a Municipal Trail Network



1. Introduction

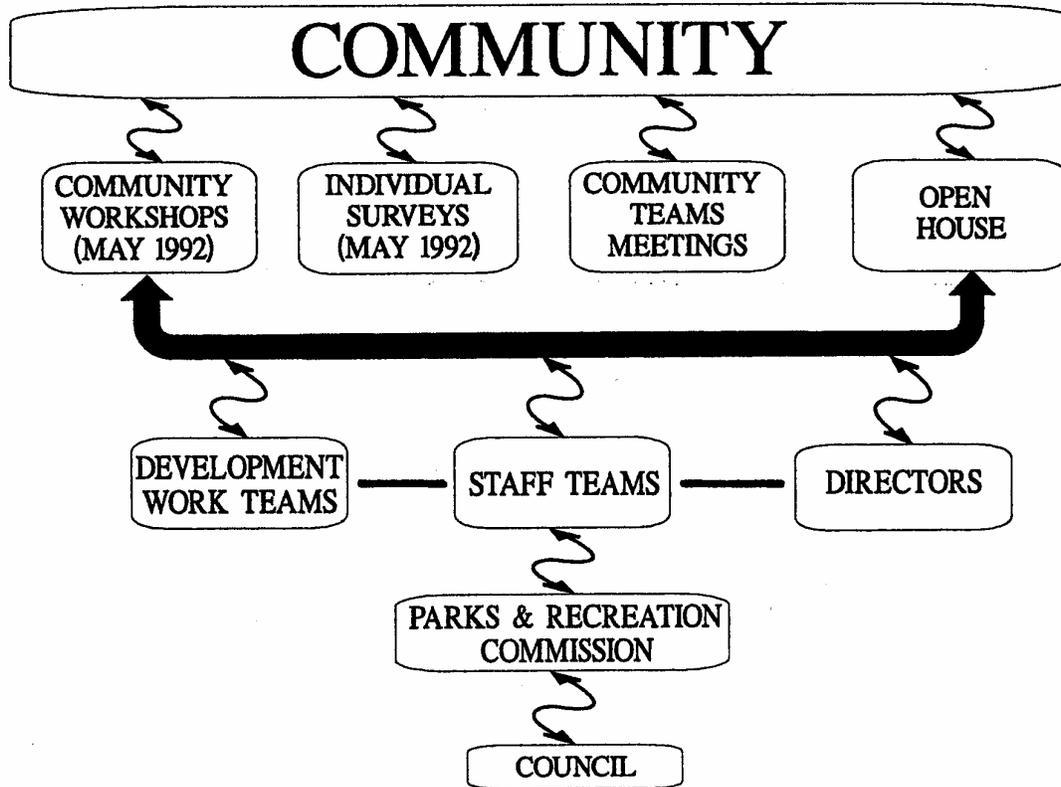
1.1 Active Living

Langley Township is an "Active Living" community - a community dedicated to working with its residents to create a range of opportunities for an active lifestyle. The pursuit of "Active Living" is an individual choice, which can include creative endeavors, cultural expression, personal development, physical activity and social interaction. Through an "Active Living" lifestyle one discovers unique talents and interests, creates new friendships, and reinforces family and community relationships.

The Municipal Trails Project exemplifies the Township's commitment to the "Active Living" initiative. Through this project and its associated programs, opportunities will be provided for individuals and families of all ages and abilities to connect with their neighbours, other communities, the natural environment, and heritage resources.

This project has placed strong emphasis on public involvement, a key part of the Township's overall corporate mission and value statements that have arisen from the Langley Tomorrow Program. In that spirit, the project was named **Community Connections**, as it connects community to community, citizens to the environment, and citizens within communities to each other. As outlined in **Figure One**, there are a number of components to this process.

Figure One
Project Organization



The Plan documents the Langley trail network project process, rationale and results, and culminates in a recommended trail network and implementation plan. It is intended that the trail system accommodate pedestrian, wheelchair, bicyclist and equestrian users, be used for both recreation and transportation purposes, and connect communities, municipalities and regional facilities. In addition, the plan includes work and capital programs, and policies for the Township to consider as part of its ongoing commitment to future trails.

1.2 Rationale

The Township has experienced tremendous growth and change over the last twenty years. In 1971, Langley Township was a rural community of 22,000. Twenty-three years later we are a "community of communities" with a population greater than 70,000 and an annual growth rate in excess of 4%. In light of this change, Township Council and staff embarked upon the Langley Tomorrow Program in 1989/90 to evaluate our direction based upon a clear understanding of our community and the capabilities of our municipal organization.

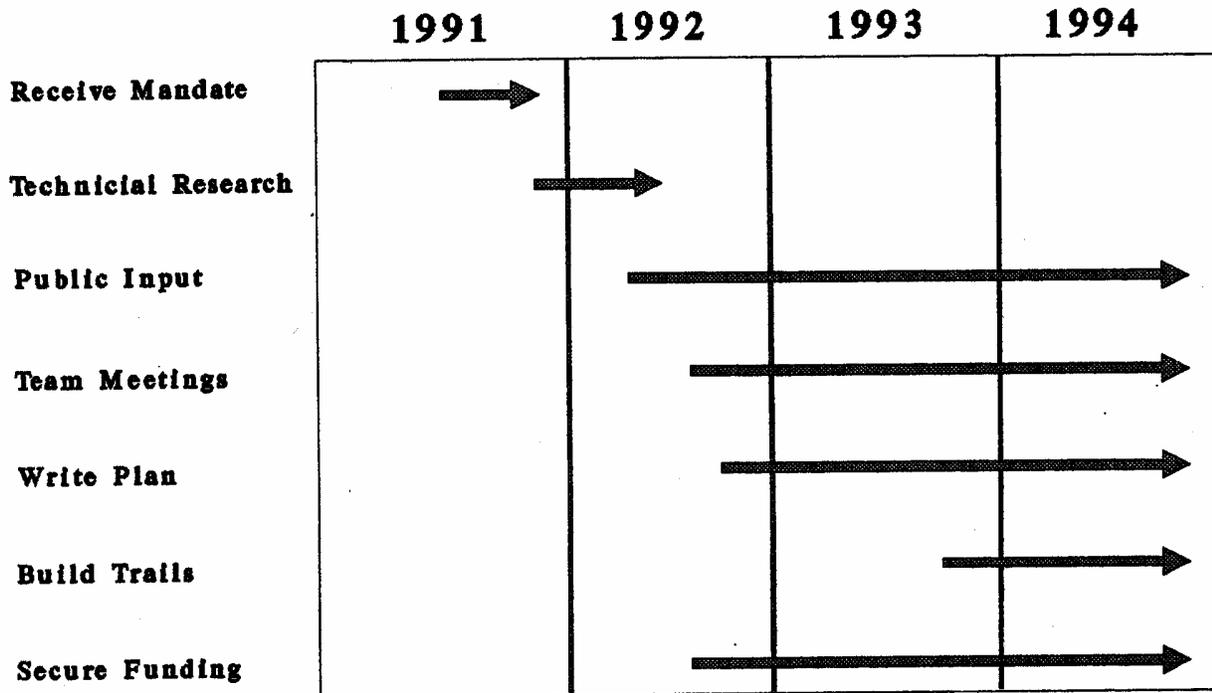
This highly public process provided a clear reading of the lifestyle expectations of our residents. Survey research discovered that **the use of parks and trails was the most popular recreation** activity of the Township residents. Of those who mentioned the need for more outdoor facilities, over 64% suggested the provision of more trails. An update of the Langley Tomorrow Program conducted in the fall of 1993 indicates that provision of trails continues to be important.

While other municipalities face the challenge of superimposing trails over developed urban areas, Langley Township has a unique opportunity to implement much of the trail connections as part of community development.

2. Introduction

The planning process was initiated in December 1991 and resulted in the adoption of the Community Connections Plan document in 1994. The process was characterized as a collaborative effort between various agencies, jurisdictions, municipal departments and community residents. The project schedule is outlined in **Figure Two**, and specific details are discussed below.

**Figure Two
Project Timeline**



2.1 Overview

Project planning commenced in December 1991 with a draft project vision, process and schedule, and a literature review. After meeting with the Directors and Council, public workshops were held in May 1992 to gather community input. From the workshops, 3 community teams of interested volunteers and staff worked together to refine the process, product and priority locations. A draft plan was presented to Council in March 1994.

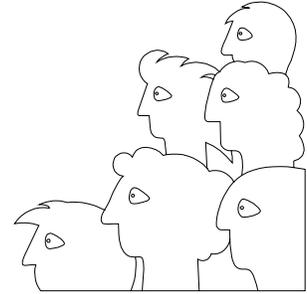
Opportunities to refine the draft were provided through a series of open houses.

2.2 Staff Team

In late 1991, a multi-disciplinary staff team was assembled to coordinate the planning process and to bring together a variety of perspectives and expertise. The team included representatives from School District No. 35 (Langley), the Greater Vancouver Regional District Parks Department (GVRD Parks), the Royal Canadian Mounted Police (R.C.M.P.), and the municipal divisions of Engineering, Parks and Recreation Services, Community Development, Public Works and Finance.

The mandate of the staff team was to:

- ◆ Implement a process for the development of a trail system
- ◆ Define a mission statement, goals and objectives
- ◆ Provide design guidelines
- ◆ Make recommendations regarding education, enforcement, encouragement and environmental issues
- ◆ Outline a strategy to implement the plan in the short and long term.



The staff team periodically met with the Directors, the Parks and Recreation Commission, and Council to seek their guidance and approval, and to provide progress reports; and on an ongoing basis, provide regular forums for public input.

2.3 Development Team

As mentioned previously, Langley Township is experiencing tremendous growth pressures. To ensure opportunities for trail dedication and development are not being missed while the plan was being prepared, a staff development work team was established. **The purpose of the team is to review current development permit, rezoning and subdivision applications and determine what trail opportunities and guidelines should be pursued by staff with the developers.**

2.4 Public Participation Workshops

Establishing the key components and direction of this project included a considerable amount of participation from local residents. At the initial stage, public workshops were held in each of the three geographic communities: East, Northwest, and Southwest. Invitations were sent to over 100 residents and agencies who had indicated an interest in trails and press releases were published in the three local newspapers inviting any interested persons to attend.



The purpose of the workshops was to seek residents' views on the elements of a successful trail system, set priorities for future routes, and to solicit volunteers to continue to work with staff teams on an ongoing basis. Based on the workshop discussions, a draft mission statement was produced, a comprehensive list of issues was compiled, popular routes were defined, preferences for priority routes in the future were identified, and community connection teams in each geographic community were established.

2.5 Questionnaire

A questionnaire was prepared to obtain information on trail use in Langley including such issues as the routing of existing trails, potential improvements, mode of trail use (walking, running, horse riding, mountain biking, wheeling, and road cycling), purpose of trail use (community or recreation) and frequency of trail use. The questionnaire was included in the invitational packages and made available at the workshops and all recreation offices. More than 100 people attended the workshops and completed the questionnaires during the workshops and 37 other individuals completed and returned the questionnaire to the staff team.

2.6 Community Teams

Community teams comprised of local residents and staff were established in each community. **The purpose of the teams is to secure regular communication linkages between the local residents and municipal staff.**

The Community Teams generally meet on a monthly basis to discuss trail guidelines, priorities within the specific community, options for non-municipal funding, cooperative problem solving strategies, area specific issues, current opportunities and municipal budget recommendations.

2.7 Future Activities

A number of open houses have been scheduled for the public to review the proposed municipal trails plan. The purpose is to ensure the proposed priorities, the location of trail initiatives, and trail guidelines are supported by the community, given the inherent constraints.

It should be noted that the staff team has managed the **planning** phase. It is, however, anticipated that the magnitude of responsibilities associated with the **implementation** phase will necessitate the designation of a **Trails Coordinator** who can devote a significant amount of time to this process. The duties associated with such a position would include:

- ◆ Administering the implementation process
- ◆ Facilitating the staff and community teams
- ◆ Coordinating specific trail designs
- ◆ Preparing annual budgets and work programs
- ◆ Researching funding sources
- ◆ Preparing tenders and supervising construction of future trail projects
- ◆ Preparing brochures
- ◆ Managing the public participation and education process
- ◆ Liaising with specific user groups

Recommendations

1. **That the Community Connections team continue to coordinate the planning process and monitor the Plan's progress.**
2. **That the development work team continue to facilitate current trail development opportunities.**
4. **That the community teams from each of the 3 geographic areas continue to meet on a regular basis to provide input into trail development.**
5. **That the community teams will host open houses for the public to review specific trail designs in their neighbourhoods as part of the trail planning process.**
6. **That a Trails Coordinator continue the trails implementation phase as outlined in Section 2 of the Community Connections Planning Document for a Municipal Trails Network.**

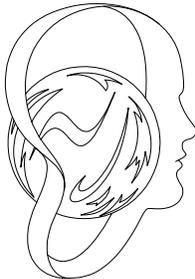
3. Issues

A number of key issues were identified during the planning process. Each of these topics requires review in order to ensure orderly development of the project.

3.1 Engineering

- ◆ Designation of routes and destinations consistent with the vision for a municipal trail system.
- ◆ Identification of design guidelines for the various individual and shared uses.
- ◆ Development of safe and functional design requirements for trails and ancillary facilities.
- ◆ Determination of the appropriate location of shared uses: bicycle, motor vehicle, pedestrian, equestrian.
- ◆ Planning for continuity of the trail network with communities and between regions and municipalities.
- ◆ Acquisition of properties and/or rights-of-way.
- ◆ Prioritization of capital expenditures that provide the greatest public benefit within budget allocations.

3.2 Education and Encouragement



- ◆ Consideration of alternate modes of travel through the promotion of the network and education of the public on proper use and etiquette.
- ◆ Reduction of conflict between motor vehicles and other highway users through the implementation of an awareness program.
- ◆ Reduction of conflict between trail users and adjacent property owners by creating community ownership of the trail system, by including neighbourhoods in the design process and by reconciling negative perceptions of trails.

3.3 Enforcement, Safety and Liability

- ◆ Promotion of a code of conduct where trail etiquette and safety is expected, practiced and monitored by trail users.
- ◆ Development of design and management strategies to support the safe use of trails where shared use will occur.
- ◆ Protection of the municipality, property owners and trail users from extraordinary liabilities.

3.4 Environment

- ◆ Protection of streams, fish bearing habitat and other environmentally sensitive areas.
- ◆ Balancing the provision of more recreational trails with the preservation of scenic, rural and environmentally sensitive areas.

3.5 Implementation

- ◆ Establishment of an implementation strategy to facilitate the realization of the vision, goals and objectives of a trails network plan in the short, medium and long term.
- ◆ Establishment of a five year plan consistent with community priorities.
- ◆ Recognition of the importance of community and volunteer involvement in all aspects of trail development, use and maintenance.
- ◆ Allocation of municipal and other sources of funding for construction and maintenance of the trail network.

4. Vision

Based on the issues identified, the parameters for the proposed trail network were formulated through the workshop process and subsequently fine-tuned by the community teams.

The following represent the proposed Mission Statement and Objectives for the Community Connections: Langley Township Trail Network Plan. (For reference, a list of definitions for several of the terms in the plan is included in **Appendix One**.)

4.1 Community Connections Mission Statement

To develop and maintain a Township-wide road and off-road trail network to better meet the recreational and transportation needs of pedestrians, equestrians and bicyclists.

According to the Mission Statement, the Township of Langley wishes to encourage and promote the safe use of pedestrian, equestrian and bicycle trails for transportation and recreational purposes.

When reviewing specific trail corridors, the recommended location will be chosen based on a wide range of criteria including adjacent vehicular traffic speeds and volumes, expected user types and volumes, adjacent land uses, corridor condition, grades and environmental impacts.

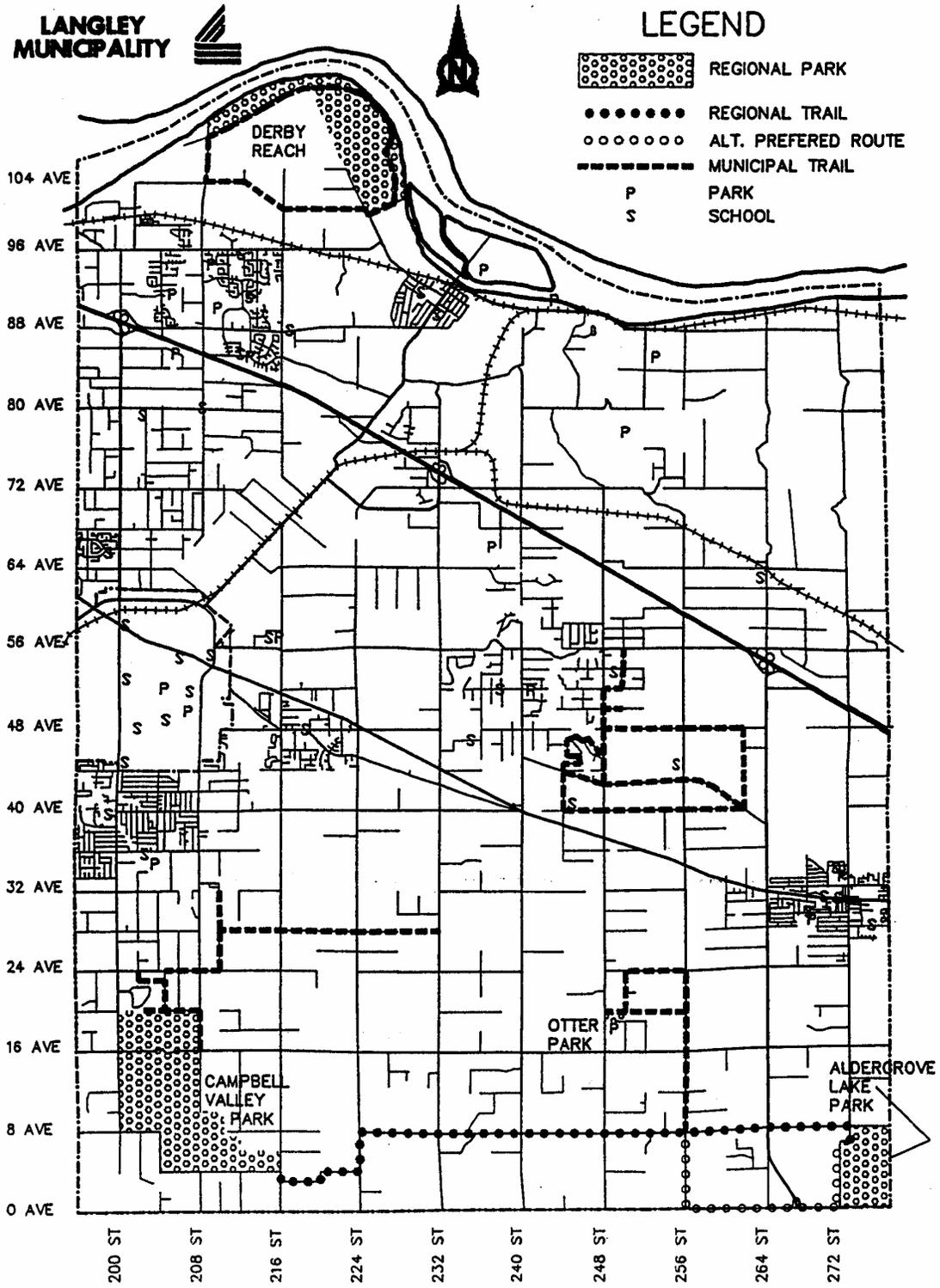
The typical options for trail location include: rural on-road shoulder or separate, urban on-road, road lane or sidewalk, or off-road. For example, a specific corridor with low vehicular speeds and volumes, low adjacent land use intensity (e.g. farms), gentle slopes, adequate road width and surface, low expected user volumes and conflicts, and low environmental impact would likely lead to an off-road recommended trail location. As volumes of users and/or vehicles increase to more than 2,000 vehicles and/or 500 users per day, shoulder or separate trails should be considered.

The Township of Langley adopted an equestrian trail system in 1989. Shown in **Figure Three**, the system was identified by the Council-appointed Equestrian Advisory Committee and generally follows the 8th Avenue corridor, between Campbell Valley Regional Park and Aldergrove Lake Regional Park. The completion of this system is considered by workshop participants to be a high priority. It will also be open to pedestrians and, in most sections, bicyclists.

During a number of public workshops, it was determined that the Trails Network for the Township of Langley should be:

- ◆ Safe, accessible, enjoyable and convenient for equestrian, pedestrian, wheelchair, bicyclist and other non-vehicular users, founded on a balanced consideration of principles related to engineering, education, environment, encouragement and enforcement.
- ◆ Oriented to the transportation and recreation functions for a broad range of local and regional interests, considering non-vehicular users of all ages and all abilities.
- ◆ Implemented in a cost effective manner, considering a responsive balance between users, needs, costs, benefits and ongoing responsibilities.
- ◆ A community oriented partnership process from planning through implementation, with methodology and rationale documented in a reference report for ongoing trail planning, management and community review.

Figure Three
Adopted Equestrian Trail System (1989)



Coordinated with adjacent jurisdictions, land users, land owners, ongoing developments, current capital programs, users and non-users, including impact evaluation criteria such that the communities are enhanced.

- ◆ Inclusive of as much of the Township as practical, connecting within and between communities and other destinations.
- ◆ Initiated with pilot trail projects that can be used to review trail planning, design and operation concepts for use in future trail development.

4.2 Public Input

Although the number of completed questionnaires was low, a great deal of information was provided regarding trail use in Langley. This data is summarized below.

4.2.1 Routing of Existing Trails

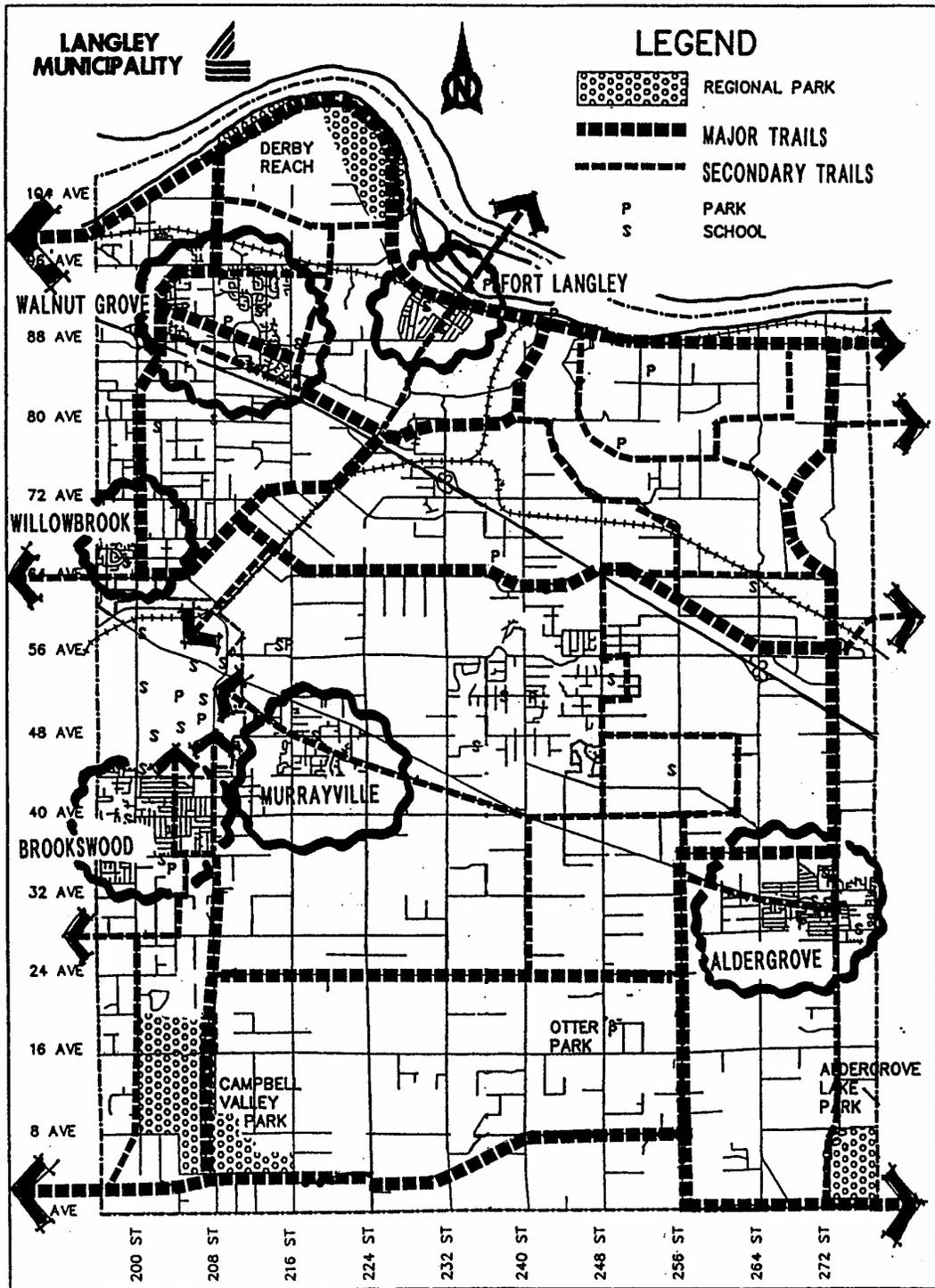
Generally, popular trails are close to the three regional parks: Aldergrove Lake, Campbell Valley and Derby Reach. The link along 8th Avenue between Campbell Valley Regional Park and Aldergrove Lake Regional Park appears the most popular existing trail. While the three regional parks provide good internal trail systems, they are also popular trail destinations and origins.

In addition, there seems to be a popular north-south link along 272nd Street (south of the Trans Canada) and along 264th Street (north of the Trans Canada). Other popular trail routes include such old country roads as Allard Crescent, Telegraph Trail, Rawlison Crescent and Robertson Crescent. Destinations, natural scenery and accessibility make these trails attractive.

Walking and cycling trails are being proposed and/or built in such communities as Walnut Grove, Willowbrook and Brookwood/Fernridge, and an extensive trail system is being developed in Walnut Grove. The Willowbrook Community Plan calls for a landscaped parkway with a greenway and bicycle path along 200th Street. The Brookwood/Fernridge Community Plan shows a continuous conservation area through the community which could be used for trail developments.

Figure Four provides an overview of a conceptual trail system to meet needs identified in the questionnaire and workshops.

Figure Four
Conceptual Trail System



4.2.2 Areas of Potential Improvement

Safety, better connections with existing trails and more natural trails with beautiful scenery were the most frequently noted areas of potential improvements. Also, workshop participants identified a small change to the adopted equestrian trail system as it approached Aldergrove Lake Regional Park. Instead of 8th Avenue, it is suggested that 0 Avenue, between 256th Street and 272nd Street is a more practical trail route.

4.2.3 Mode of Trail Use

Most respondents use trails for walking and horseback riding. Other modes of trail use, in order of importance, include road bicycling, mountain bicycling, and running. Residents indicate that most users will want to travel between 30 and 120 minutes, and to end their trip at the point of origin. A network of short loops around the Township appears to be preferable, within the context of an overall desire to be able to access all communities. Closed loops of various lengths will also allow users to choose distances appropriate to their ability and time constraints.

4.2.4 Purpose of Trail Use

While almost all respondents use trails primarily for recreation, a few respondents use trails for commuting. A small number stated that they use trails for both recreation and commuting.

4.2.5 Frequency of Trail Use

The questionnaire respondents are generally frequent trail users. Almost half (25) of all respondents use trails 2 to 5 times a week. Nineteen use trails 1 to 5 times a month. Twelve respondents use trails 1 to 10 times a year.

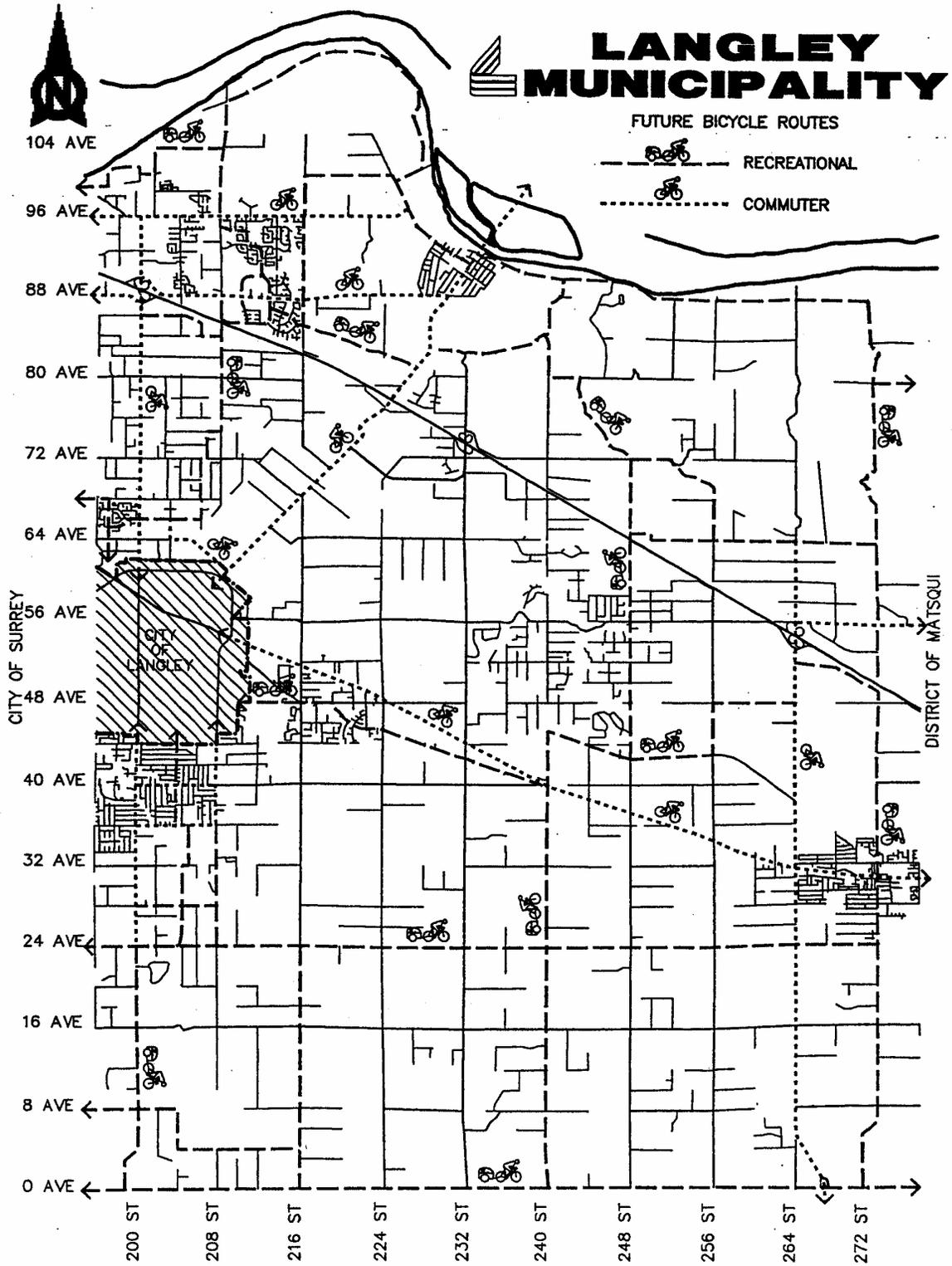
In most cases, the information obtained from the questionnaire reinforces the issues discussed at the workshops. The information will be useful for the Township and Community Teams to prioritize trail goals, determine trail routing and address trail needs.

4.2.6 Potential Routes and Opportunities

Based on the questionnaire results, a conceptual trail plan was prepared and is shown in **Figure Four**. The plan focuses on providing connections to existing trails, and to scenic nature trails, which were the most frequently noted needs. Based on this conceptual plan, new trails will be planned and built to increase the recreation and transportation potential of the existing network by connecting **community facilities** (such as schools, municipal parks, shopping centres, major equestrian centres and recreation centres); **tourist attractions** (such as Fort Langley National Historic Site, the Langley Centennial Museum and National Exhibition Centre, the B.C. Farm Machinery Museum, the three regional parks, and heritage sites), and **special features** (such as the waterfront along the Fraser River and dyke rights-of-way). Opportunities also exist to use trails as a venue for a variety of leisure pursuits such as special events, organized programs or informal activities.

While the conceptual trail plan identifies connections schematically, specific trail corridors will be identified in the implementation phase. Consideration will be given to all possible corridors, including quiet roads, unopened rights-of-way, rural or undeveloped areas. **Figure Five** identifies potential bicycle routes developed to date in consultation with Community Teams.

Figure Five
Future Bicycle Routes



In identifying and prioritizing future trail opportunities, the following criteria will be considered:

- ◆ Is it the last link to complete a loop?
- ◆ Is it easy to acquire lane for right-of-way?
- ◆ Is it a safe location for a trail?
- ◆ Is it cost effective to build a trail there?
- ◆ Does it conform/conflict with Council's policies?
- ◆ Is there community sponsorship for this trail?
- ◆ Does use demand warrant a trail?
- ◆ What are the environmental implications of the trail?

Recommendations

6. **That the Mission Statement, Definitions and Objectives of the Community Connections: Planning Document for a Municipal Trail Network be adopted.**
7. **That the Conceptual Trail System shown in Figure Four of the Community Connections: Planning Document for a Municipal Trail Network be approved as the basis for future trail network planning in the Township.**
8. **That the bicycle route plan shown in Figure Five of the Community Connections; Planning Document for a Municipal Trail Network be approved as the basis for future bicycle route planning in the Township.**
9. **That all community plans and neighbourhood control plans, identify alignments for trail routes indicated on the conceptual trail route plan of the Community Connections: Planning Document for a Municipal Trail Network and that these trails be protected through rezoning, subdivision and development application process where possible.**

4.3 Objectives

Integration of these trails into the existing road and recreation network, and use of trails as a comfortable and convenient non-vehicular, alternate mode of transportation is to be achieved through Engineering, Education, Environment, Enforcement, and Encouragement objectives.

4.3.1 Engineering

To provide a comfortable, enjoyable and convenient environment for pedestrians, equestrians, commuter and recreational cyclists.

Since there is potential for conflicts between individual users on trails as well as between user groups on trails, shared use is one of the most challenging issues which the Township must address. Ideally the trail design will permit self-enforcement by users such that safe, enjoyable and cooperative use takes place.

Potential on-road and off-road conflicts to consider in any design include: car-bike, car-pedestrian, car-horse, bike-pedestrian, bike-horse, pedestrian-horse, pedestrian-bike-horse, and car-pedestrian-bike horse. Many pedestrians are intimidated by horses, especially some wheelers who cannot easily step out of the way. Horses are frightened by anything approaching that they are unable to see, or, by some cyclists who pass by unannounced. Sufficient trails should be provided to reasonably minimize these potential conflicts.

The guidelines outlined below indicate each type of trail users, and are intended to promote a safe, comfortable, cost effective and enjoyable trail experience.

The underlying assumption is that all trail users will watch out for each other with due care and attention, in harmony with nature. It should also be recognized that user volumes and characteristics and trail conditions change over time, requiring judicious use and periodic review of design guidelines. Therefore, **these guidelines are for reference only and should not be applied without proper judgment.** Each trail site will have difference constraints which will require slightly different treatments. Also, special features such as benches, signs, viewpoints, or alignment details should be part of any comprehensive trail design.

◆ Single Use – User Characteristics and Design Guidelines

Users have been categorized into three general groups: pedestrian, equestrian and bicyclist. Each group is reviewed below to define a typical operating envelope and trail design specifications.

Many factors affect user requirements: expected user volume, other trail user types, grades, adjacent land use, legal requirements, experience, and trip purpose. Characteristic user dimensions are guidelines only and must be used in conjunction with sound engineering judgment on a trail specific basis. Examples of typical trail designs using these user characteristics for single use and multi-use trails are given throughout.

Pedestrians

Pedestrians come in all shapes, ages and sizes, with a variety of interests and abilities. Based on documented and accepted trail guidelines, pedestrians require a path that will provide for their immediate dimensions (i.e. 0.75 m wide 2.0 m tall), meandering allowances as they walk (i.e. 0.3 m +/- each side), comfort distance from edge of trail borders (i.e. 0.5 m buffer \pm) and special requirements necessary for dog walkers, strollers, and wheelchairs (dimension depends on specific item).

In addition, pedestrians often walk in pairs or threes, and depending on volume, must move for oncoming traffic. Strollers can also function within the above defined trail envelopes, but need paved or compacted gravel surfaces.



The Township Dog Bylaw prohibits dog owners from letting their dogs run free, so it is expected that a pedestrian with a dog on leash should not need more space than is currently being provided for on the pedestrian trails. (Off-leash areas are provided for in regional parks.) Inadvertently, some dog owners will violate the bylaw on Township trails, therefore, on trails adjacent to sensitive land uses, consideration will be given to upgrading or 'dog proofing' fences, and special signage.

On-Road: Most urban streets have sidewalks or walkways which are by definition pedestrian trails. In any signed or designated walking loop, these trails should not be ignored.

Usually as part of road construction, 1 to 2 metre wide pedestrian trails are provided. On curbed major roads, sidewalks are usually 1.5 to 2.0 metres. If no curbs exist, the Township provides 1.5 metre wide shoulders, or occasionally, 1 to 2 metre asphalt walks behind the ditch line for school routes where vehicle speed and volumes warrant. An annual sidewalk program is intended to address the demand for new walks in areas not covered by Development Cost Charges (DCC's) or other development driven sidewalk installation programs.

Off-Road: Off-road or natural trails are generally low volume trails and, may not require the same width as high volume trails. For example, potential designated nature trails in Glen Valley will harmonize with and protect the environment by using the same route and width of existing trails in the order of 1 metre wide. Conversely, current trails in Walnut Grove along the conservation areas are using a 2 to 3 metre width. These wider trails should be considered for urban areas, trails with expected higher pedestrian volumes, trails along high speed or busy roads and/or shared use trails.

Surface: Gravel, asphalt and concrete trails are most common due to low maintenance costs and generally satisfactory service to most pedestrians. Gravel is used on low volume trails, or for quick repair or interim treatment, or to suit rural treatments. However, gravel trails are noisy, uneven and not suitable for strollers and/or joggers.

Wood chips provide a much softer, cushioned surface that is relatively easy to install. Wood chips or bark mulch may be warranted on a natural trail where a natural soil surface would become unstable due to high volumes of use. (In environmentally sensitive areas, wood chips or bark mulch are not acceptable due to their deleterious characteristics and potential to leach into and harm nearby streams.)

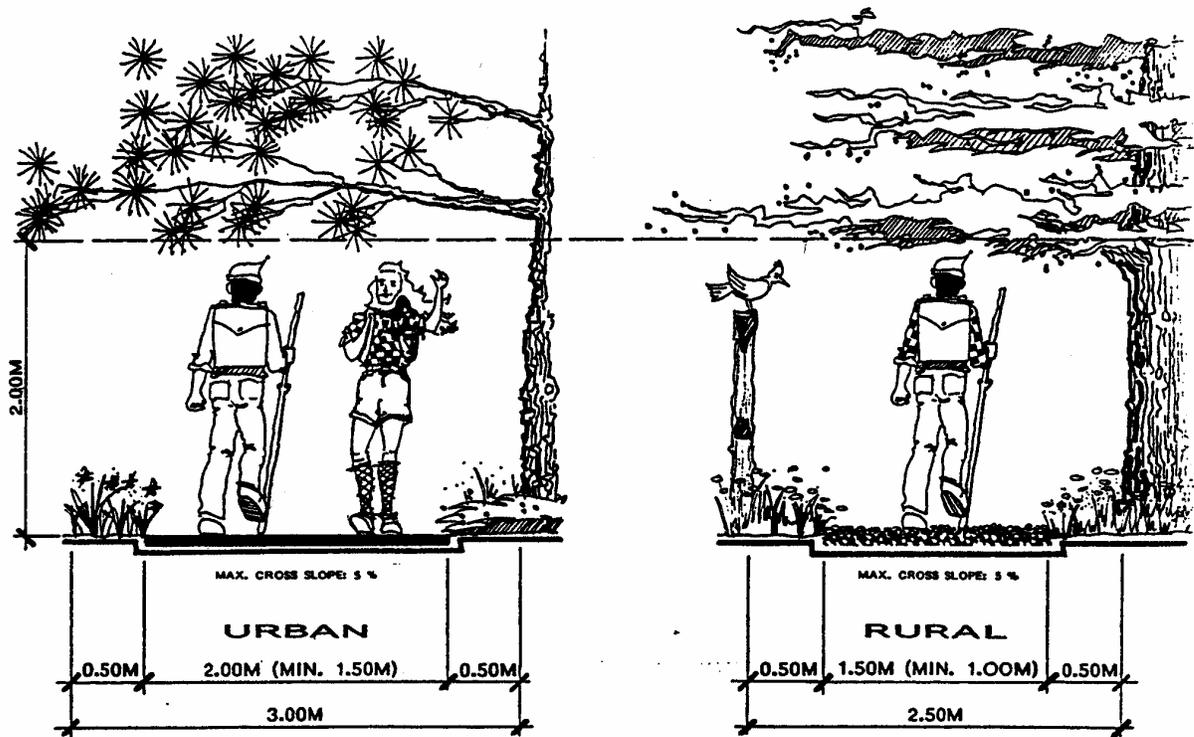


In specific cases, nature trail surfaces will be left in their natural state because they are part of a natural experience and provide the least disturbance to the natural setting. As the trail network and trail user volumes grow, however, a 'natural' trail may have to be upgraded to reduce future trail maintenance costs and protect the environment from erosion and drainage problems.

Grade: Generally, grades are not a problem for walkers or joggers. For strollers or wheelers, however, grades should be kept to an 8% maximum. Where steeper grades are anticipated, users should be advised.

Figure Six outlines a number of trail characteristics related to pedestrians.

Figure Six
Trail Characteristics – Single Use - Pedestrian



Equestrians

Langley is proud of its equestrian heritage. Its residents own more horses than those in any other municipality in B.C. (Source: 1991 Census of Agriculture). The GVRD Parks Area East staff have built extensive equestrian trails in Campbell Valley and Aldergrove Lake Park. As well, guidelines have been developed by the GVRD for shared use trails in Matsqui and Pacific Spirit Park (UBC). Hence, guidelines for equestrian trail users have been fairly well developed and tested, and have incorporated input from local and regional equestrian groups.

Generally, horses can be frightened and shy suddenly, and, of the three main trail user groups, are the most unpredictable. To avoid creating hazards for all, shared use trails generally have trail courtesy codes requiring pedestrians and cyclists to yield to equestrians.

Notwithstanding the yield policy, equestrians are not permitted to gallop or race on municipal or GVRD trails as this action endangers all other users, and in particular, small children, the physically challenged and the elderly.

Also, the skill level of riders varies, both in judging how to ride a trail and in keeping control of their mount. It is estimated that many trail users will be horse rentals or casual, inexperienced riders. Signage advising inexperienced users of shared use, shared use guidelines, and the courtesy code will contribute to increased safety of all users.

On and Off-Road Horses are not defined by the Provincial Motor Vehicle Act (MVA), but they have the same rights and duties on highways as if they were bona fide vehicles. Galloping and racing on roads is illegal under the MVA.

The GVRD has found 3 m high trails to be most cost effective for horse trails. This allows for two horses to walk side by side, or for horses in single file to pass either pedestrians or other horses. On nature trails, these guidelines can be reduced to 2.0 to 2.5 m wide native surface material.

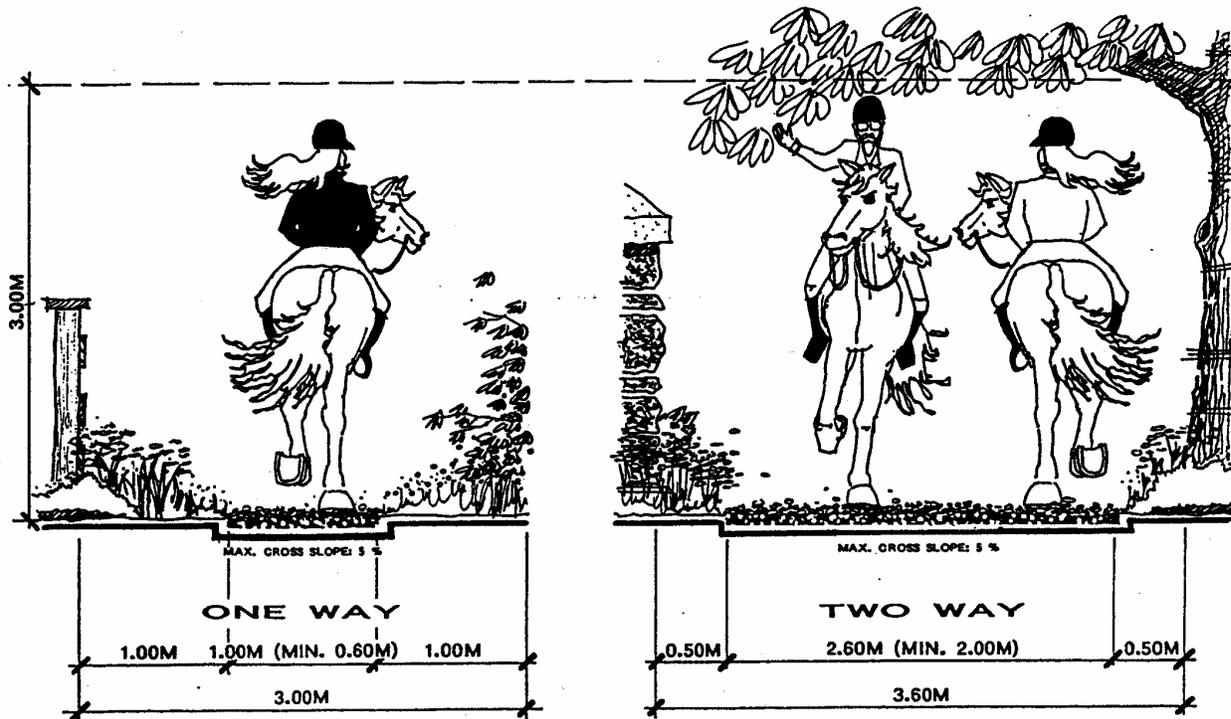


Surface: Most surfaces can be used, but the equestrian community prefers, where not conflicting with natural trails, to use hemlock-fir hog fuel surface over a gravel sub-base. This allows for a quiet, soft ride with stable, dry footing. One other surface used successfully in Campbell Valley regional park is "gyrosand", a fine dust from rock grindings; however, it is very costly to purchase due to limited sources.

Grades: Horses can climb grades as steep or steeper than those which can be climbed by most pedestrians, but generally a 15% maximum should be used.

Guidelines prepared by the GVRD are summarized in **Figure Seven**.

Figure Seven
Trail Characteristics – Single Use - Equestrian



Bicyclists

Bicyclists can be categorized into two groups: on-road bikes (ten speeds, racing bikes, etc.) and off-road bikes (mountain bikes, BMX's, etc.). Motorbikes and ATV's are not permitted on trails. The GVRD recommends that bicyclists yield to both pedestrians and horses to avoid reckless bicycling practices and injury to other trail users.

On Road: On the road, bicycles, like horses, are not defined by the MVA as vehicles, but have the same rights and duties as if they are vehicles. All bicycles should be equipped with bells to alert others of their approach, and with lights for travel after dark.

Urban and rural local streets are usually suitable for **bicyclists** without special lanes because vehicular traffic is minimal. Connections between communities, however, require that bicyclists use non-local roads, especially in the Township where communities are spread apart.



As an interim solution, some bicycle routes can make use of existing arterial roads, which have not yet been fully developed to a four lane standard, or where the traffic volumes are low. In these cases, the lanes are wide enough to permit motorists to give bicyclists a wide berth.

A wider guideline for arterials to include bicyclists in the outside lane may be entertained where high bicycle use can be expected. As this option represents higher dedication and construction costs, it can only be justified where there is a high public benefit. For example, the Willowbrook Community Plan, includes a greenway for pedestrians and bicyclists along 200th Street. Similar approaches may be justified along the Fraser Highway and Glover Road if bicyclists and pedestrian volumes warrant.

On-road bicyclists may include children, families, mountain bikers or road racers. The Canadian Cycling Manual and Provincial Ministry of Transportation and Highways Design Manual have excellent guidelines for both on and off-road bicycles trails. If road traffic is traveling at low to moderate speeds (i.e. 60 km/h or less), experienced bicyclists can be integrated with traffic on the road by allowing a 3.7 to 4.0 metre wide curb lane in urban areas or 1.5 metre paved shoulder in rural areas. Intermediate skill levels and/or higher travel speeds would dictate the need for 4.5 metre curb lanes in urban areas and 2 metre paved shoulders in rural areas. Elementary/school age and inexperienced bike riders should be encouraged to stay off busy roads and use sidewalks or, if volumes of pedestrians and bicycles warrant, use designated trails separate from other traffic. This will, however, necessitate changes to the Township's Highway and Traffic Bylaw.

If space permits and there is a long, uninterrupted distance between intersections (i.e. few crossings, side streets, etc.), a separated, painted bike lane may be considered. This solution should be reviewed on a design specific basis, as bike lanes in highly urban areas can lead to other safety considerations such as conflicts with parked cars, turning traffic, and other road obstructions.

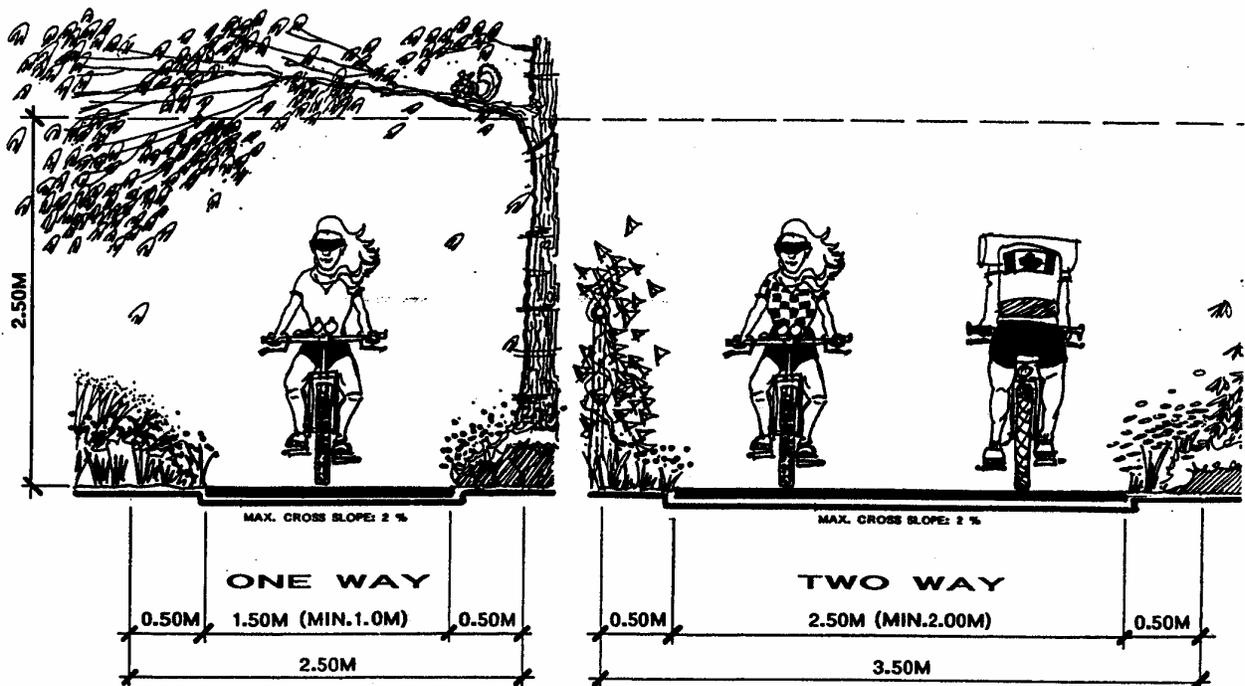
A 1.6 metre width and 2.5 metre height envelope is required for all bicyclists. For one-way travel, this translates to 2.5 metres, which includes a 0.5 metre buffer from trail edges. For two way travel, this translates to 3.5 metres, which includes 0.5 metre buffers. This information is summarized in **Figure Eight**.

Off-Road: Mountain bikers can go on any trail accessible to horses or pedestrians, but mountain bike tires can cause rutting of soft trail surfaces. As an example of this problem, the Bicycling Association of British Columbia (BABC) requires riders and organizers to rebuild and clean up trails after a race. Most off-road enthusiasts are likely more experienced than average or school age bike riders. To encourage proper use of trails, the Township will post signs that indicate which trails are open to bicycles.

Surface and Grade: Any surface and/or grade is generally accessible by bike, but gravel and asphalt are most commonly found, with asphalt being the most popular in urban areas. In cases of shared trails, however, it may be advisable to use hard packed gravel (i.e. screening) so that bicyclists go slower and other trail users can hear bicyclists coming.

Generally, bicyclists travel at between 20 and 50 km/h, with accepted design speeds of roughly 30 km/h unless steep hills are involved. This gives a corresponding minimum design radii in the order of 12 metres. Sight distance is also critical to bicyclists, because of their inability to stop quickly as horses and pedestrians. On horizontal and vertical curves, sight distance around corners and over hills should be in the order of 35 metres, with added allowances if there are many hidden intersections, viewpoints and/or crossings.

Figure Eight
Trail Characteristics – Single Use - Bicycles



◆ **Shared Use - User Characteristics and Design Guidelines**

Guidelines for the design of trails shared by two or more user groups are provided in this section. The shared use guidelines are based on recognized single use guidelines discussed previously and adapted for local conditions, but with allowance for more than one user: Pedestrian - Equestrian; Pedestrian-Bicycle; and Pedestrian - Equestrian - Bicycle.

A key consideration in the design rationale is the likelihood of users meeting head on (going in opposite direction), passing each other (going same direction) and using the trail segment (expected user traffic volumes). In other words, shared use guidelines do not simply require the arithmetical addition of single use design widths. It is more appropriate in Langley, with generally lower trail user volumes, to add only the expected predominant one or two users group widths. For example, a shared used Pedestrian – Bicyclist – Equestrian trail in a rural area might only require adding the Pedestrian – Equestrian user group widths.

Off-Road: The primary differences between on-road and off-road guidelines are the need for buffers and the need to accommodate two-way trail user traffic. Buffers are a critical feature of the trail design, because they provide for safe stopping sight distance, for clearance from overhanging bushes and for additional space to weave or stand aside when users meet, stop or pass each other.

Surface and Grades: A surface of gravel or screenings should be installed on all off-road trails to be shared with horses to warn approaching users to hear each other and to cushion hooves. Alongside roads, graveled or paved shoulders must suffice for horses unless a separate boulevard trail is built.

Where equestrians are not one of the permitted users, the shared use trail surface can be either asphalt or "screenings". Road shoulders meant to accommodate bicycles should be surfaced with asphalt.

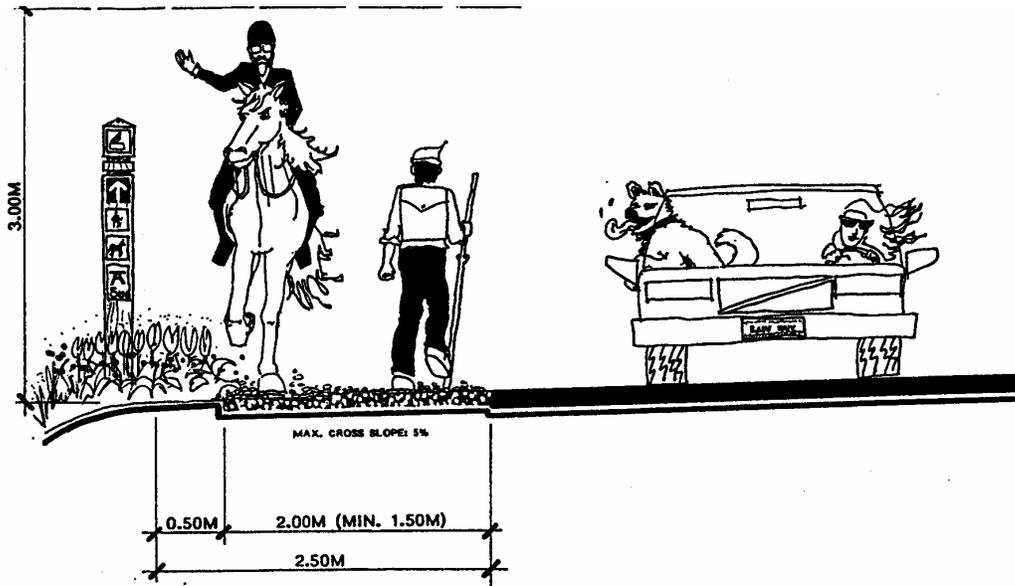
On-Road: On-road guidelines are based on a one way trail on each side of the road to ensure pedestrians face vehicular traffic, and equestrians and bicyclists move with traffic. In general, the user with the largest trail width requirements determines the overall trail corridor width. Typically a .5 metre buffer is required only on the ditch side of a road shoulder trail. "Minimum trail width" will be increased to "preferred width" once volumes exceed 500 users per day.

Shared use trails will consist of widened curb lanes (for bicyclists), sidewalks (for pedestrians, or, if wide enough and signed, for bicyclists), shoulders (for pedestrians, bikes and/or horses) and/or separated trails (for pedestrians, bikes and/or horses). The Provincial Ministry of Transportation and Highways (MoTH) has excellent guidelines for on-road bicycle trails, including warrants based on design road speed and expected motorist volumes. The MoTH guidelines will be applied in the Township. It is a Township objective to provide sidewalks along major school routes and next to curbs, where possible (local roads excepted unless built by developer or by Local Improvement).

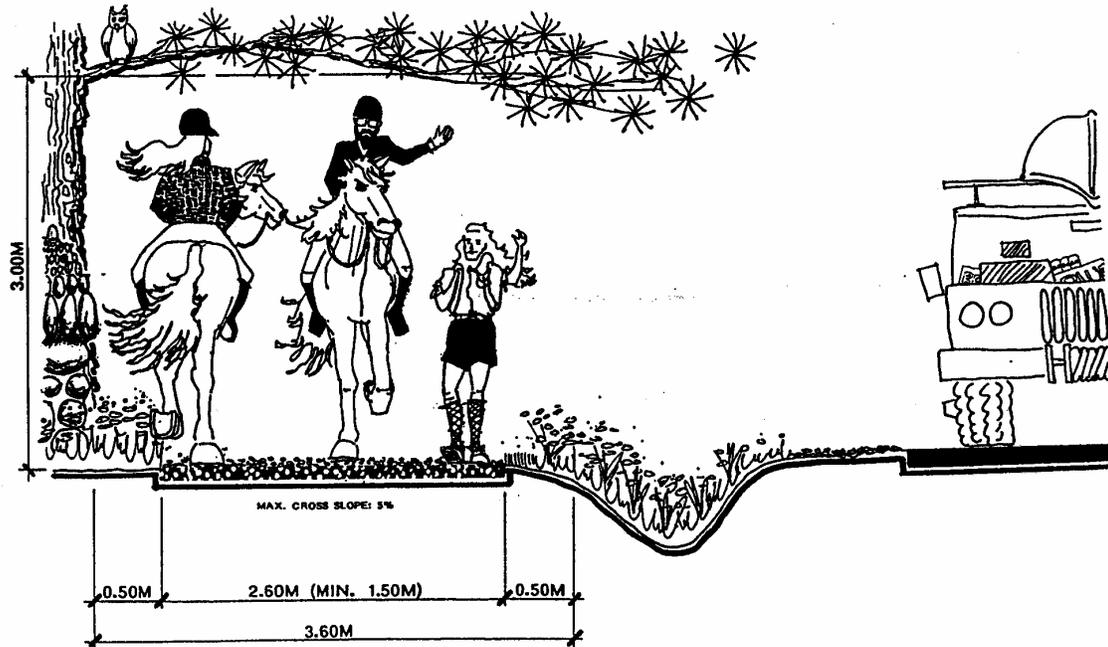
The Township will be specially designating some rural roads as "Country Roads". These are roads that by virtue of scenic or heritage value are being maintained as close as possible to their traditional form. Trails on Country Roads will require special design to maintain the road character. (Refer to the Township Country Roads Maintenance Guidelines.)

Characteristics of shared use are pictured in **Figures Nine, Ten and Eleven.**

Figure Nine
Trail Characteristics – Shared Use – Pedestrians/Equestrians

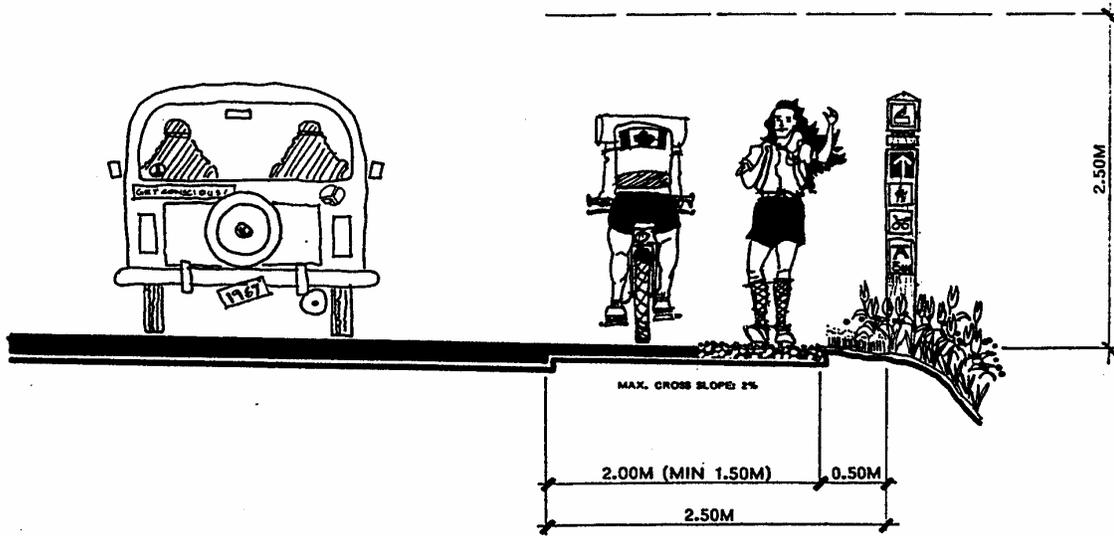


PEDESTRIAN/EQUESTRIAN TRAIL-ROAD SHOULDER

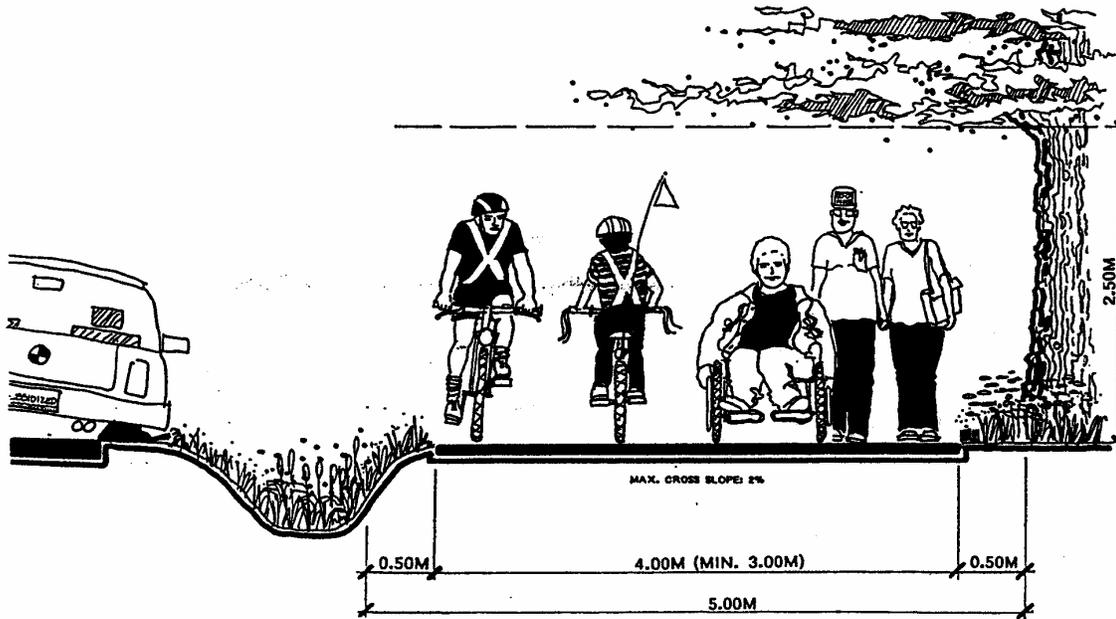


PEDESTRIAN/EQUESTRIAN TRAIL-SEPARATED

Figure Ten
Trail Characteristics – Shared Use – Pedestrians/Bicycles

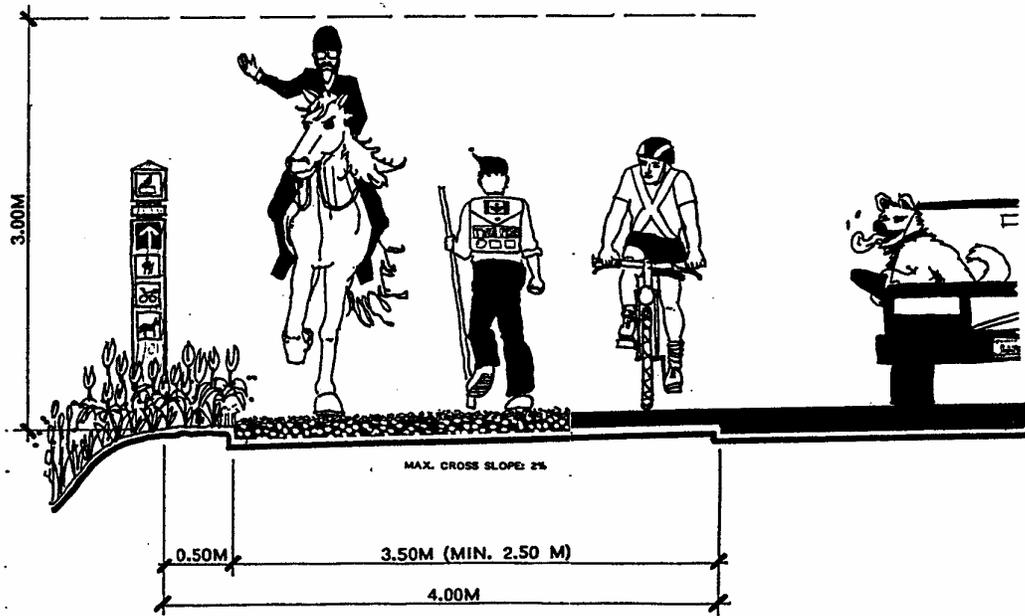


PEDESTRIAN/BICYCLE TRAIL-ROAD SHOULDER

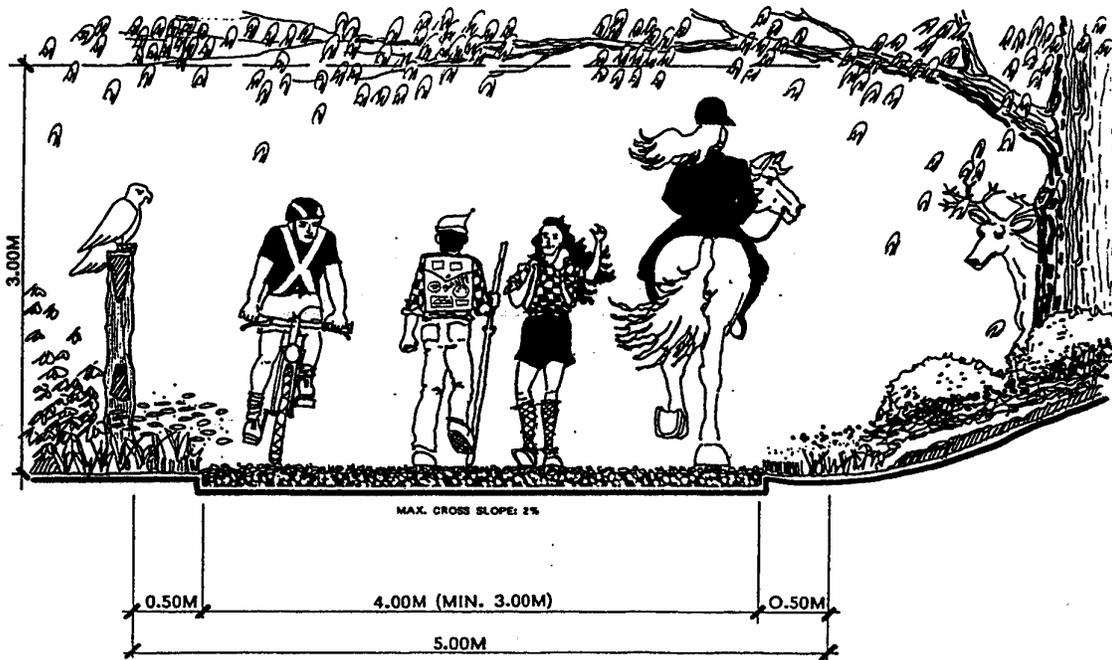


PEDESTRIAN/BICYCLE TRAIL-SEPARATED

Figure Eleven
Trail Characteristics – Shared Use – Pedestrians/Bicycles/Equestrians



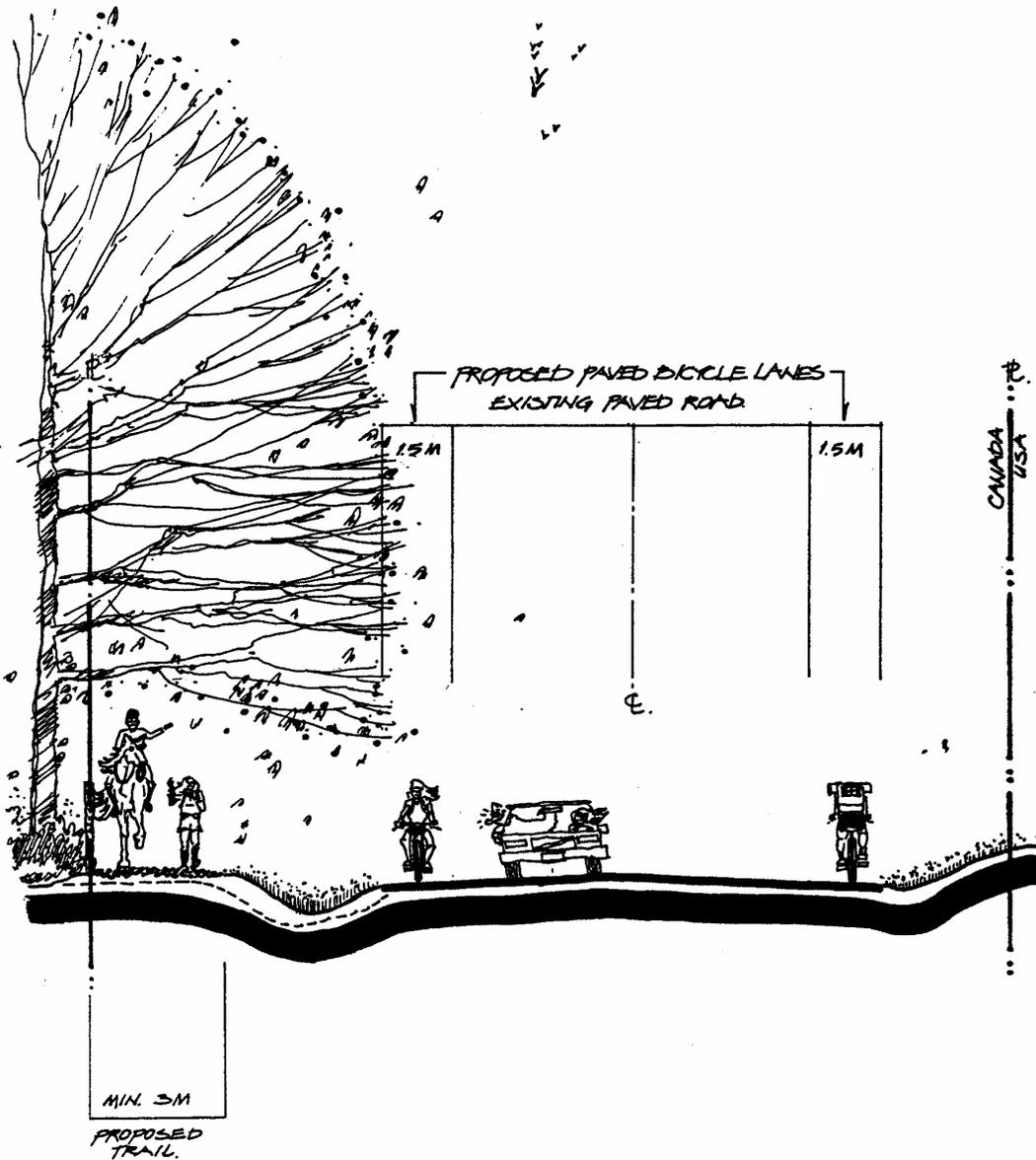
**PEDESTRIAN/EQUESTRIAN/BICYCLE TRAIL
ROAD SHOULDER**



**PEDESTRIAN/EQUESTRIAN/BICYCLE TRAIL
SEPARATED**

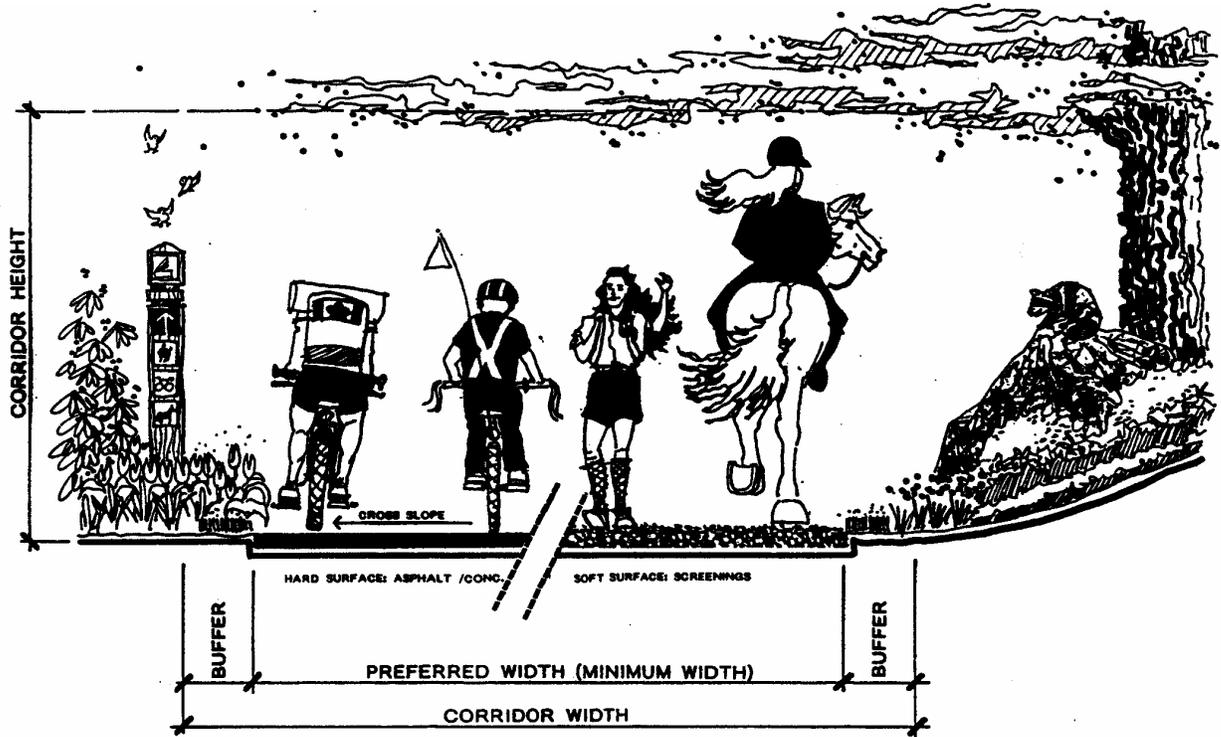
Consideration should be given to providing additional width for shared use trail routes on new roads and when paving shoulders on existing roads. It is desirable that horses using on-road trails be separated from motorist traffic to allow horse and rider more shy space from other trail users and/or passing traffic. For this reason, on a one-way trail, a 2 metre gravel shoulder for horses is recommended for all on-road horse trails, behind a 1.5 metre paved bicycle/pedestrian shoulder. Where high trail user volumes (in the order of 500 users per day) and/or high traffic volume (in the order of 2,000 vehicles per day) are expected, it is suggested that a separate trail on one side be considered to augment existing shoulder trails, as shown in **Figure Twelve**.

Figure Twelve
Trail Characteristics – Separated Use / High Volume – On-Road



A definition of trail terms is included in **Figure Thirteen**, with a summary of trail design guidelines shown in **Figure Fourteen**.

Figure Thirteen
Trail Components – Definition of Terms



**Figure Fourteen
Summary – Trail Design Guidelines**

	Condition	Trail Width		Buffer	Corridor Clearances		Max. Slopes		Right of Way	Surface Finish	Figure #
		Min.	Pref.		Width	Height	Length	Cross			
SINGLE USE											
Pedestrian											
Urban	-	1.50	2.0	0.50	2.50	2.00	10%	5%	3.0	Asphalt	Fig. 6
Rural		1.0	1.50	0.50	2.50	2.00	25%	5%	3.00	Screenings	
Equestrian											
One way	Shoulder	0.60	1.00	1.00	2.00	3.00	20%	5%	N/A	Screenings	Fig.7
Two way	Separated	2.00	2.60	0.50	3.60	3.00	20%	5%	4.00	Screenings	
Bicycle											
One way	Shoulder	1.00	1.50	0.50	2.00	2.50	10%	2%	N/A	Asph/Scree	Fig.8
Two way	Separated	2.00	2.50	0.50	3.50	2.50	10%	2%	4.00	Asph/Scree	
SHARED USE											
Pedestrian Equestrian											
One way	Shoulder	1.50	2.00	0.50	2.50	3.00	10%	5%	N/A	Screenings	Fig. 9
Two way	Separated	1.50	2.60	1.0 to road .5 to fence	4.10	3.00	20%	5%	4.50	Screenings	
Pedestrian Bicycle											
One way	Shoulder	1.50	2.00	0.50	2.50	2.50	10%	2%	N/A	Asphalt	Fig. 10
Two way	Separated	3.00	4.00	0.50	5.00	2.50	10%	2%	5.00	Asphalt	
Pedestrian Equestrian Bicycle											
One way	Shoulder	2.50	3.50	0.50	4.00	3.00	10%	2%	N/A	Screenings	Fig. 11
Two way	Separated	3.00	4.00	0.50	5.00	3.00	10%	2%	5.50	Screenings	

General Notes:

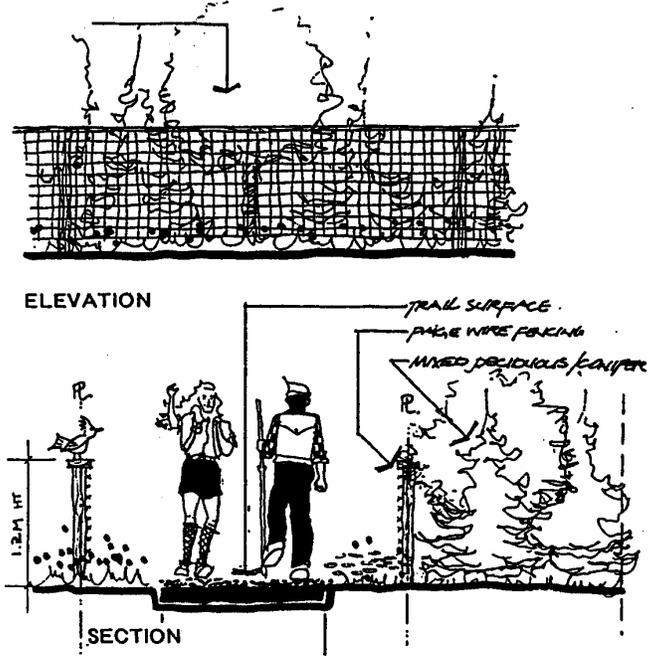
1. Buffer on 1 side for road shoulder trail.
2. Buffer on 2 sides for separated trail.
3. On separated Bicycle trails, use a 15.0 metre radius on curves (6.4 metre minimum)
4. For shared equestrian trails (i.e. with pedestrians and/or bicycles) that run along roads but behind the ditch (i.e. separated), access across the ditch should be provided (i.e. laybys) every 200 metres.
5. On roads that are designated country roads, shoulder trails will be designated in conformance with the Langley Township Country Roads identification and maintenance guidelines.

Figure Fifteen
Fencing Guidelines

◆ **Fences**

In rural areas, 1.2 metre high, graduated, square paige wire fences should be installed where potential conflicts exist between trail users (e.g. dogs) and adjacent land uses. In urban settings, a 1.2 metre high black vinyl chain link fence should be installed on trails adjacent to existing or proposed residential development. Fencing guidelines are shown in **Figure Fifteen**.

PAIGE WIRE FENCE



◆ **Signage**

Signage will be an important part of the trail network for several reasons:

- ◆ It establishes the right-of-way between types of users by designating primary user(s) based on suitability of the trail. This would not necessarily exclude other users, but would define or reinforce the need for users to yield to the primary user.
- ◆ It sets realistic expectations for who should be using the trail and therefore limits municipal construction and maintenance costs. For example, a walking trail could allow roots, stumps and steps which would not be suitable for bicyclists.
- ◆ It provides important information to users thereby assisting with proper use, enforcement and enjoyment of the trail system. Trail head signs will include such information as: overall route, local loops and facilities, courtesy code and information brochures.

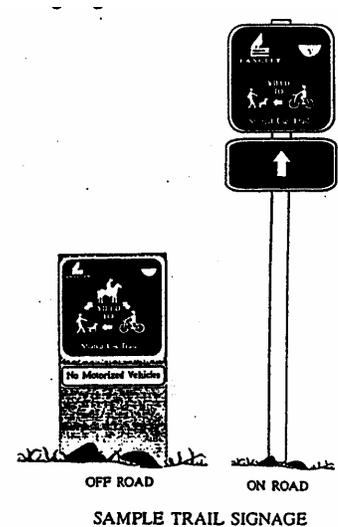
Signage guidelines are shown in **Figure Sixteen**.

**Figure Sixteen
Signage Guidelines**

Consideration will be given to using trail names or color tabs together with trail maps showing routes of each different trail. Directional route signing is not necessary on the street system if network maps are available but route signing may be desirable on streets for promotion and public awareness of the system. Trails are more interesting and anticipation is enhanced if they lead to a “destination” such as vistas, lakes, views, parks or areas that have environmental or historical significance. These destination features should be shown on the route map or brochure.

The GVRD, ITE, Canadian Cycling Manual, and MoTH trail signage design guidelines all recommend using internationally recognizable symbols, as per the Canadian Manual of Uniform Traffic Control Devices (MUTCD). This information is available for perusal at Municipal Hall. These are proven symbols which are the most effective for tourists and novice trail users. The MUTCD will provide the necessary highway sign policy for trails, including the choice of symbols, appropriate locations and warrants for use.

Signage for route maps, brochures or trail head signs will also incorporate features contained in the “Langley Corporate Identity Manual”.



◆ **Maintenance**

Every section of trail will incur maintenance costs, whether in sweeping, litter pick-up, resurfacing, vandalism repair or periodic inspection. Therefore, it is important that long term maintenance costs be taken into account in all design and budgeting exercises. Trails on road shoulders will need to be swept regularly to provide users with an area separate from traffic.

As off-road trail volumes are generally lower than those of roadways, off-road trail inspections need not be as frequent as roadway inspections. Current Township practice is to perform regular visual field inspections of all major roads. For off-road trails, it is recommended that field inspections be carried out at least once per season, in conjunction with a SPOT improvement program.

A SPOT improvement program has been instituted in Seattle for cycling trails, whereby bicyclists are given SPOT check cards to phone in or complete and deposit at community centres, police stations and city hall. The cards are small easily filled out forms which simply state location and type of trail problem needing attention, date and time noticed, and name and number of contact person for follow-up if further details are needed.

These SPOT cards are useful in augmenting the maintenance program and let trail users know Seattle is serious about trails, trail user safety and trail quality. A SPOT program for Langley Township would be broadened to apply to all user groups.

Recommendations (Engineering)

10. That the Trail Design Guideline be adopted as the Township Trail Design Guidelines
11. That the Corporation's Subdivision and Development Control Bylaw be reviewed to incorporate trail requirements.
12. That a signage concept be developed as a guideline for all trail signs, including appropriate engineering standards, and features outlined in the Langley Corporate Identity Manual.
13. That a trail inspection and maintenance policy be developed and implemented.
14. That a "SPOT" improvement program be implemented to provide ongoing monitoring of trail conditions and to help coordinate maintenance programs.

4.3.2 Education

To promote the safe and responsible use of trails for transportation and recreation.

To promote safe and responsible methods of riding bicycles and horses

A cursory review of existing local leisure programming indicates a tremendous opportunity for future programming which is oriented towards educating and encouraging the proper use of the trail network facility. Even at this early stage, Parks and Recreation Services is incorporating the trails initiative in several diverse ways.



- ◆ The Arts and Heritage Department of Parks and Recreation Services is offering a historic bike ride program which utilizes a bike route between the Museum in Fort Langley and Derby Reach Park. The program includes a historic commentary and cycling instruction.
- ◆ The Bike Safety program and brochures offered in each geographic community incorporates a "Code of Conduct" into its program content.
- ◆ The Running and Walking Clubs will be utilizing the trails network as the venue for their programs.
- ◆ The Langley Walk Steering Committee will be investigating ways of utilizing the existing trails annually as part of the event and in combination with an environmental or historic commentary.

Future directions could include interpretive programs, painting classes, regular heritage and nature tours, etc., which utilize the trail network facility as the program venue. A comprehensive education program that is accessible to a variety of user types is required. Also, there needs to be programs that promote widespread acceptance of the horse and bicycle as legitimate trail and road users whose operator shares the same rights and responsibilities as that of a motor vehicle operator in the transportation network. While many of these

programs could be facilitated through the Parks and Recreation Services Division, other organizations should be encouraged to coordinate programs.

Opportunities also exist within the School District and R.C.M.P. to educate users and potential users through clubs, organizations, and public service agencies on safety and proper conduct by all types of users. There would be a benefit, however, to centralize coordination of these programs through the proposed Trail Coordinator position.

Recommendations (Education)

- 15. That Parks and Recreation Services identify leisure programming goals for the municipal trails network.**
- 16. That Parks and Recreation Services review the leisure programming opportunities associated the municipal trail network, and recommend specific clubs, associations or outside agencies to coordinate and monitor the various initiatives in the short, medium and long terms**
- 17. That as part of the interagency program coordinating initiative, the Parks and Recreation Services Division work with outside agencies to identify leisure programming opportunities for outside agencies to provide and encourage the implementation of such programs.**
- 18. That the Trails Coordinator investigate appropriate clubs, organizations, and public service agencies to provide education for users and potential users on safety and proper conduct by all types of users.**

4.3.3 Encouragement

To encourage the provision and use of trails for commuting and recreational purposes.

An effective means for encouraging the use of trails is to advise the public of the existence and locations of the various trails. One method is through information brochures which should be prepared for each user group, and outline trail etiquette, features, locations, distances and facilities associated with each trail. The target groups would be Pedestrians/Wheelers, Recreation/Advanced Cyclists, and Equestrians.

A second type of brochure is needed to assist the Municipality in its efforts to provide trails as part of development. This brochure would target developers and provide an opportunity to highlight Council's desire for a municipal trails system and the preferred locations and guidelines for trails as part of specific development applications. This brochure would be made available at the Community Development counters as part of the literature that is provided in response to subdivision, zoning, development permit and building permit inquiries.



There are a several existing mechanisms that could be used to encourage the public to use trail amenities. Such opportunities exist thought the Parks and Recreation Services Leisure Guide, the Parks Brochure, Active Living promotions, Press Releases, School Board Bulletins, and Langley Network.

Adequate end-of-trip facilities also encourage trail use. End-of-trip facilities to be considered include trail heads, parking, litter containers and benches.

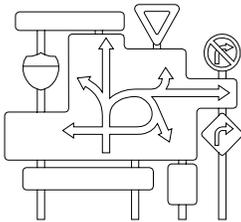
Recommendations (Encouragement)

19. That a staff team develop and publish a developer's guide and trails brochure for each user category.
20. That the 1993 Budget allotment for the public education component "Community Connections" be acknowledged as seed money and future budgets include provisions to publish additional brochures or revisions to existing brochures.
21. That all communication methods be considered to inform the public of municipal trails initiatives.
22. That end-of-trip facilities be considered where feasible in budgeting for new trails or trail enhancements.

4.3.4 Enforcement, Safety, and Liability

To ensure user and motorist compliance with the proposed code of conduct and existing municipal and provincial laws.

◆ Existing Traffic Laws & Regulations



All trails located on public streets, rights-of-way, parks or public land are considered highways by the definition contained in the Provincial Highways Act. Consequently, for such trails the Township has the same legislated rights and duties that pertain to the administration and regulation of highways under its jurisdiction. Similarly the conduct of users on these trails is governed by the regulations set out in the Provincial Motor Vehicle Act (MVA) and the Township's Highway and Traffic Bylaw. The Township may, by bylaw, make regulations pertaining to trail use consistent with the intended operation of trails.

Some trails in the network fall on provincial highways which are under the jurisdiction of the Ministry of Transportation and Highways (MoTH). Enforcement of conduct on these trails rests with the Province in consultation with the Township.

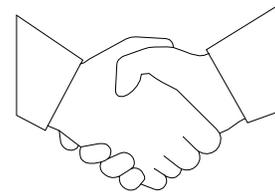
Under current legislation bicycles are not vehicles, but bicyclists have many of the same rights and duties as if they were driving a vehicle. Currently, bicyclists in the Township are not allowed on sidewalks, unless signs permit bicycles on the sidewalk. Bicyclists will soon be required to have bells on their bikes to warn pedestrians and other bicyclists well in advance. Up-coming Highway and Traffic Bylaw revisions are recommended to make bicyclists give way to pedestrians and horses when on trails.

The intent behind this change is to regulate and recognize existing conditions, while still promoting pedestrian, bicyclist and trail safety.

Pedestrians have latitude on how and where they walk. The only regulations pertaining to pedestrians are that, on roads without curbs, people must walk facing traffic. Also, upcoming Highway and Traffic Bylaw revisions are recommended to require pedestrians on trails to give way to horses.

Regulations governing horse riding are covered in the MVA and Township bylaws, and state among other things that no horse racing is allowed on highways, and that horse riders must ride with traffic. Horses are not vehicles but horse riders have many of the same rights and duties as if they were driving a vehicle.

Regulations covering other user groups, such as skateboarders and rollerskaters, also exist. Skateboarders and rollerskaters are not allowed on roads or sidewalks, which basically relegates them off trails and on to private lots. At this time, the traffic regulations in the Township and on provincial highways are enforced by the Langley RCMP detachment, who work in close cooperation with the Township's Public Works and Engineering Departments. No additional trail enforcement staff are envisioned by this trails plan. It is intended to create a trail system that for the most part is self-enforcing, or a system on which users feel no motivation to disobey signs or abuse the facilities. This can be achieved through the use of an effective courtesy code, informational signage, convenient trail alignments, a variety of trail opportunities for all user types, adequate trail design guidelines and efficient maintenance standards.



An interesting option which should be explored if enforcement becomes a problem is an "Adopt-a-Trail program or what GVRD - Parks calls "Volunteers in the Park" (VIP) Program. Both initiatives encourage community groups and organizations to have their members, who are park or trail users, to patrol and report trail maintenance problems and to talk to trail users about code of conduct and other informational items. The selection process for the VIP's is critical to ensure issues that are reported are impartial.

A Community Connections Courtesy Code has been developed to promote safe trail use and respect for and between trail users and the environment. Specifically the Courtesy Code prescribes the following:

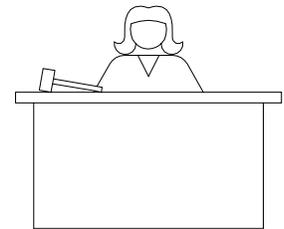
- ◆ For safety, bikes yield to pedestrians and horses; pedestrians yield to horses.
- ◆ Dogs must be on a leash at all times. Be considerate of other trail users by cleaning up after your dog if in an urban area.
- ◆ When approaching other trail users from behind alert them to your intentions.
- ◆ Slow to a walk when approaching other trail users. Travel in single file when passing or being passed.
- ◆ Watch for natural hazards such as fallen logs, overhanging branches, soft spots and holes. Do warn other trail users of natural hazards.
- ◆ Respect and look after the natural environment. Don't interfere with farm animals.

- ◆ Stay on designated trails or roads. In parks, off trail use may damage sensitive areas or other user facilities.
- ◆ Keep small children within reach and under control.
- ◆ Respect private property – don't trespass.
- ◆ **Trail Liability – Other Jurisdictions**

In establishing the trails, the Township does not wish to incur any extraordinary liability. Additional trail facilities will necessitate creation of relevant policies to ensure acceptable construction, inspection and maintenance standards to demonstrate “due diligence”. Claims arising from loss or injury on behalf of users or neighbouring property owners should not be more prevalent than currently incurred on our existing highways.

Many other jurisdictions in and around the GVRD have comprehensive trail systems from which Langley can gain knowledge to help create the safest system economically possible. A quick check with staff of several agencies revealed the following claims history:

- ◆ GVRD - Parks maintain an extensive trail system in their regional parks. These trails can be classified as mostly rural with very little interaction with motor vehicles. Some shared use conflicts do occur but the enjoyment of use far outweighs the conflicts and few claims have been made.
- ◆ Burnaby has a trail system that includes horse trails and is perhaps in lineal trail distance most similar to Langley. Burnaby staff have not experienced any claims as a result of their trail system.
- ◆ Vancouver also has trails, including equestrian trails in its Southlands areas. The only liability concerns raised to date include potential conflicts with golf courses. At this time, no claims have come to light; however, it was noted that one of the golf courses has installed a high netting adjacent to the trail to minimize the potential for injuries as a result of flying golf balls.
- ◆ The Stanley Park Seawall is a well known trail and much heavier used than any of Langley's trails will be, at least in the short term. Several pedestrian/bicycle conflicts and liability claims occur each year. The Parks & Recreation Department has had to close sections of the seawall to bicyclists to minimize conflicts which they feel could not otherwise be guarded against.
- ◆ Whistler also has extensive trails. The trails have become so popular to bicyclists and joggers that these too are developing serious conflicts. One claim noted was that of a bicyclist suing Whistler for damages suffered when inadvertently falling off a bridge approach.



- ◆ Maple Ridge has an extensive equestrian trail system adopted by Council. Some pedestrian use occurs on the equestrian trails. To date no serious accidents have been reported.

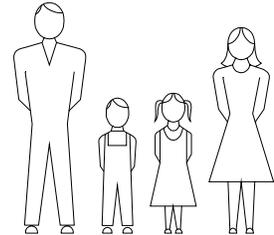
- ◆ **Considerations for Safer Trail Environments**

To promote a self-enforcing and safe trail environment, consideration should be given to lighting, fencing, location, and the expected number and type of users. Generally, it is too costly to light all trails and residents often do not want the glare of lights shining into their homes at night. For the most part, the Township trail system is not intended for nighttime use and lighting will not be provided. On the other hand, lighting may be warranted if the particular trail forms the only connection between neighbourhoods.

Fencing should also be used to promote trail safety, especially in residential areas. Where trails pass within view of homes, "open" style fences will be used to allow surveillance of users and discourage loitering. As discussed previously, preferred fencing includes chain link in urban areas and Paige wire in rural areas.

Trail corridor location is often set by overall system requirements. In reviewing sub-areas and trail location details, however, consideration must be given to local concerns. A "what if" exercise should be done to determine the worst scenario that could reasonably happen on the trail. For example, near schools, students may tend to skip class, fight, smoke or buy drugs on trails in forested areas out of sight from teachers, but causing a nuisance to adjacent residents. Trails near commercial areas may promote a similar loitering opportunity. Caution must be exercised if it can be reasonably foreseen that these problems may exist, arise or be exacerbated by the presence of a trail.

Consideration of the number and expected type of users are perhaps the best methods of promoting safe trail environments. If the trail has many resident users (i.e. moms, dads, schoolchildren, strollers, joggers, etc.), the chances are good that undesirable behavior will be discouraged.



Recommendations (Engineering)

23. **That the Township continue to adopt trail policies, design guidelines and construction, inspection and maintenance standards for trails that provide a reasonable balance between costs to the Township and level of service for the users.**
24. **That the Township's trail guidelines be reviewed and updated on a regular basis to promote consistency with other trail guidelines within the region, the first review to be done in 1998.**
25. **That the staff team investigate the establishment of a Volunteers-in-Park (VIP) program.**
26. **That the Community Connections Courtesy Code be adopted and incorporated into trail signage and trail brochures.**

4.3.5 Environment

To protect environmentally sensitive areas.

To find a balance between building trails and protecting sensitive heritage features and environmentally sensitive areas.

To develop special interest areas such as view points, cultural landmarks and water access along the trail routes through a process of consultation with governing agencies and local residents to achieve features that are culturally and environmentally acceptable.

The Township of Langley is made up of a rich tapestry of cultural and natural features. Langley's natural features include hills and valleys, ravines and forests, lakes and streams, bluffs and shorelines; all with their own significant ecosystems. The cultural features include: agriculture fields, homestead sites, heritage roads, parks, gravel extraction areas, etc. The Municipal Trails Network will accomplish connections between the cultural features of communities, between neighbourhoods and will connect residents to the natural environment that we commonly share.

Responses to the questionnaire distributed during the three public workshops indicated that the areas of potential improvement most needed were for better connections with existing trails and more nature trails with access to beautiful scenery. Better access requires determining the routing and design of trails that minimize environmental disturbance at stream crossings, ravine trails, and vistas. Further respect of the environmental and heritage aspects could be achieved through the location of interpretative signage along trails.



◆ Provincial and Federal Legislation

Presently, trail work in and around streams is controlled by a number of Acts. The most significant is the Fisheries Act. The Act is enforced by the Department of Fisheries and Oceans (DFO) and administered jointly by DFO and the Ministry of Environment, Lands and Parks (MOE) and Water Management Branch (WMB).

In stream water management permits are issued by the MOE and ensure that development does not negatively affect water flows, stream condition or passage and habitat requirements of fish. In most cases of development in and around streams, protection of fish and wildlife habitats are of major importance. This protection is achieved by policies of no net loss and mitigation.

Over 75% of Langley Township is within the Agricultural Land Reserve (ALR). All planned trails which would infringe upon the ALR should be reviewed with the Agricultural Land Commission (ALC) to determine if a formal application and approval is required. Current ALC policy is to require compensation for any ALR losses, in effect, a no net loss policy.

◆ Stream Crossings

Many of the opportunities to locate trails off-road occur along undeveloped road dedications. Often these rights-of-way have remained undeveloped due to the presence of steep topography or waterways. Therefore, construction of a trail within these sensitive areas will not be an easy task. As an example, trail construction within wet areas must allow for unimpeded flow of the existing drainage patterns. Approaches to stream crossings should minimize the amount of fill material.

The design of bridges must take into account the potential users of the bridge, the span requirements, the ongoing maintenance costs, an aesthetic response to surroundings and the limitations of access. All stream crossings must be approved by the MOE and DFO. In all cases of trail construction in or around streams, precautions must be taken to assure that; no sedimentation due to construction or trail use occurs, that movement of fish is not impeded and, that any habitats disturbed during construction are maintained or enhanced past the preconstruction level, and that work is carried out only during the time (fish window) specified by DFO.

◆ **Ravine Trails**



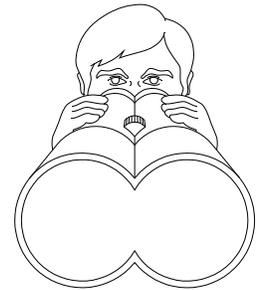
Within the Township, protection of the natural environment is accomplished in part by the dedication of ravines and watercourses as Conservation and Development permit areas at the time of development. These areas commonly termed riparian zones should be left in a vegetated and undeveloped state to serve as buffers for the streams that they surround. These stream area zones should be protected to serve as drainage courses, open space and fish and wildlife habitat and be dedicated for public use.

Within many of the Townships' community and neighbourhood control plans, trails are shown as running within these conservation areas. The locations of most of these trails are shown, generally, as being located at the top bank area. This is an area where the topography is gentle thus having the least impact on the conservation area for trail construction. As a matter of course, the Ministry of the Environment requires a 15 metre strip along the top of bank area as a non disturbance area within which trails may be allowed to be located. The Township currently utilizes the first 3 metres adjacent to this non disturbance area for ravine trail construction, as part of development requirements.

Construction of trails within the non-disturbance areas must be warranted on a site specific basis and undertaken with as little removal of vegetation as possible. Specifically, all trees within these areas must be retained necessitating a trail that meanders around the existing trees. Shrub type vegetation can be removed down to the roots with the trail built up over the undisturbed soil layer.

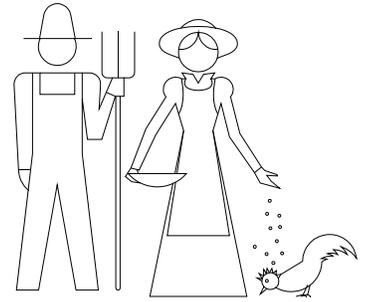
◆ **Vistas**

The attraction of most recreational trail systems exists in the views - both short and long distance. Long distance views are dependent on having a height difference or unobstructed foreground. Short distance views can include attractive vegetation, unique cultural features, water and wildlife. Access to vistas should be developed at regular spacing along a particular trail to maintain interest and a sense of destination throughout a trail system. These areas will receive a higher amount of use than other portions of a trail and, therefore, must be constructed with more care. The location of a view point at the edge of a bluff would require some sort of railing for safety and a hard deck surface to minimize the disturbance to the unstable soils at the edge of the bluff. Major view points may also include other amenities such as benches, bike racks, hitching posts, washrooms.



◆ **Cultural Features**

Langley is rich in cultural heritage. These significant historical sites offer an excellent opportunity for interpretation to promote respect for and understanding of our cultural heritage. Major historical sites should be connected to the trail system as these areas will become destinations and/or starting points for users of the trails. Routes that move through the countryside should also receive signage that explains the history of the rural landscape. Trails that move through historical areas must be developed to blend into the surroundings by the use of surfaces that are appropriate, fencing that matches the established materials and locations for the trails that do not detract from the significant cultural features of a site.



Recommendations (Environmental)

- 27. That trail planning considerations include vistas, cultural features, environmentally sensitive areas and interpretive signage.
- 29. That, subject to provincial and federal regulations, wherever a trail is proposed and an Agricultural Land Reserve (ALR) and/or stream crossing is involved, damage to habitat shall be minimized and replacement and enhancement shall be implemented.

5. Implementation

Objectives related to the implementation of the Municipal Trails Network Plan are summarized below, followed by information regarding the major implementation tasks.

To develop a Township-wide shared use trail system in an incremental, progressive and fiscally responsible manner in the short, medium and long term.

To maintain a multi-department, multi-disciplinary staff team to oversee and coordinate the planning, design, implementation and maintenance of the Municipal Trails Network.

5.1 Co-ordination

- ◆ The staff team will include a representative from the following divisions: Community Development (Long Range Planning, Zoning and Subdivision), Engineering (Transportation, Public Works and Environment), Parks and Recreation, and other divisions as necessary.
- ◆ Other government agencies such as the Langley School District, GVRD Parks and the RCMP will be encouraged to participate in the staff team. Neighbouring municipalities will also be invited to participate when appropriate.
- ◆ The staff team will develop and implement an educational program to provide information on the proper use of municipal trails.
- ◆ The staff team will review development applications to identify opportunities for trail acquisition and construction.
- ◆ The Municipality will designate a Trails Coordinator from either available staff or outside contract resources, to continue the trails implementation phase.

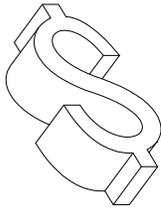
5.2 Process



- ◆ The Municipality will identify trail routes, particularly, in urban areas during preparation of community plans and neighbourhood control plans.
- ◆ The Municipality will prepare sub-area trail plans in each community, including detailed alignments, corridor widths, signage, benches, trail heads, end-of-trip facilities, etc.
- ◆ The Municipality will engage in ongoing risk management research regarding liability and safety concerns of trail construction and trail use.
- ◆ The Municipality will review road designs for the incorporation of trails on selected roads.
- ◆ The Municipality will review the program for construction annually.

- ◆ The Municipality shall undertake further work to link significant viewpoints, heritage landmarks and other interpretative opportunities along municipal trails. Heritage landmarks shall include historic sites and buildings identified in the Heritage Management Plan. Other interpretative opportunities should consider agricultural and industrial features.
- ◆ The Municipality shall coordinate with the GVRD and neighbouring municipalities to develop trail systems under the "Creating A Bicycle Friendly Livable Region" and the "Regional Park and Outdoor Recreation System" initiatives.
- ◆ The Municipality shall encourage active community participation and partnership of Langley residents in the design, funding, construction and maintenance of all municipal trails.
- ◆ The Municipality shall inform property owners adjacent to proposed trails and provide information through open house meetings, as necessary.
- ◆ The Municipality shall consult other governmental agencies where applicable, including MOE, DFO, WMB, ALC, MoTH and adjacent local governments.

5.3 Funding



- ◆ The staff team will recommend an annual budget to the Township Administrator for trail construction, maintenance, and educational programs.
- ◆ The Municipality will identify and investigate suitable external funding programs for planning, construction and maintenance of the system, including among others:
 - The Municipality shall encourage local interest groups to participate in the funding, construction and maintenance of trails.
 - The Municipality will review the potential for using Development Cost Charge (DCC) funds for trail acquisition.

5.4 Acquisition

- ◆ The Municipality will consider trails needs when reviewing development applications and secure land dedications of an appropriate route.
- ◆ The Municipality will consider direct property acquisitions only where critical for trail continuity and where no other alternatives for alignments or acquisition exist.

5.5 Education and Encouragement



- ◆ The Municipality will encourage proper use of trails. A courtesy code shall be adopted and incorporated into signage and brochures to promote safety and encourage shared use of trails.
- ◆ The Municipality should consider direct acquisition only where critical to needed trail continuity and no other future acquisition avenues exist.

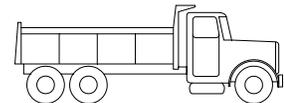
To identify trail routes, the Municipality will design a signage system which will reflect the requirements identified in the Langley Corporate Identity manual.

The Staff Teams will identify an internal communication strategy to ensure all staff are aware of municipal trail initiatives.

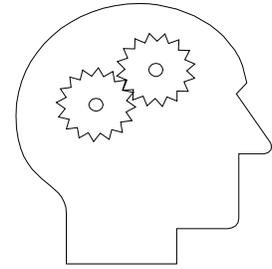
- ◆ The Municipality will provide appropriate brochures showing trail routes, courtesy code and other information relevant to trail users.
- ◆ The Municipality will design recreation programs which encourage use of the Municipal Trails Network as part of the “Active Living” concept.
- ◆ The Municipality will provide end-of-trip facilities where feasible.

5.6 Maintenance

- ◆ The Parks and Recreation Services Division will be responsible for the on-going inspection and maintenance of **off-road** trails.
- ◆ The Engineering Division shall be responsible for the on-going inspection and maintenance of **on-road** trails, the erection and maintenance of trail signs throughout the Network, and the implementation of an annual pavement sweeping program.
- ◆ The Municipality will institute a SPOT improvement program.
- ◆ The Staff Team, in conjunction with the Trail Coordinator, will encourage local community groups and organizations to participate in the “adopt-a-trail” program.



5.7 Work Program (Phase I)



The design and construction of a comprehensive and integrated shared use trail system is a long term project and estimated to take approximately 20 - 25 years to implement assuming that the recommendations contained in this report are substantially followed. The implementation process is incremental and can be broken down into phases. An incremental implementation program encourages sound financial planning and periodic review to meet the changing needs of trail users. Each phase covers approximately a 5 year period, with the following information describing **Phase I** of implementation.

- ◆ **The Community Connections: Municipal Trails Network Plan, including its recommendations, be adopted by Council.**
- ◆ **The Staff Team members be appointed and an interim Trails Coordinator designated.**
- ◆ **A Trails Coordinator, from either available staff or outside contract resources, continue the trails implementation phase.**
- ◆ **An internal communication strategy be prepared to advise staff of this initiative.**
- ◆ **A five-year capital program for the design, construction and maintenance of trails which have been identified as priorities by those who participated in the community workshops.**

These priorities, in order of importance, will include the following:

- ◆ **Complete the design, public participation process, and construction of a connecting trail between Campbell Valley Regional Park and Aldergrove Lake Regional Park.** The corridor, generally along 8th venue, has been identified (by the workshop participants and the Council appointed Equestrian Advisory Committee) as a trail to connect the two regional parks. Several sections of this trail have been constructed. Further effort is required to complete the connecting trail. While it is popular among equestrians, the trail design will address the needs of other users such as hikers, walkers and bicyclists.

An important short term component is to seek funding for the design and construction of trail routing to avoid environmentally sensitive areas along portions of this corridor at:

4th Avenue between 224th Street and 232nd Street,
0 Avenue at 272nd Street, and
210th Street and 28 Avenue.

Estimated Total Cost: \$300,000. Estimated Time frame: 3 years
Estimated Cost Sharing: Up to 50% by grants and volunteers.
Estimated Net Township Share: \$150,000.

- ◆ **Complete the design and construction of a “Walkway System” identified in the Walnut Grove neighbourhood control plans.**

Estimated Total Cost: \$600,000
Estimated Time frame: 5 years
Estimated Cost Sharing: 50% from grants and volunteers
Estimated Net Township Share: \$300,000

- ◆ **Complete the design, public participation process, and construction of the "Fort-to-Fort" trail.** A preliminary study of the trail linking Derby Reach Regional Park and the Fort Langley National Historic Site has been completed. The study recommends a trail alignment. for bicyclists and pedestrians.

Estimated Cost: \$500,000
Estimated Timeframe: 5 years
Estimated Cost Sharing: 20%from DCC's, grants and volunteers
Estimated Net Township Share: \$400,000

- ◆ **On-going public consultation and construction of other existing trails, interim trail links and routes to schools, where necessary.**

Estimated Annual Cost: \$100,000
Estimated Time frame: annually
Estimated Cost Sharing: 0, this part of the existing annual sidewalk construction capital program.
Estimated Net Township Share: \$100,000 (1993) / \$500,000 over 5 years.

- ◆ **Design, publish and update a brochure to encourage the use of municipal trails and to educate the public on the proper use of the trails.**

Estimated Cost: \$10,000
Estimated Time frame: every two to three years
Estimated Cost Sharing: 0
Estimated Net Township Share: \$10,000 (1993) / \$20,000 over 5 years.

- ◆ **Investigate using dykes and other existing rights-of-ways for trails.**

Estimated Cost: (staff time)
Estimated Time frame: n/a

- ◆ **Design and Erect Trail Signs.**

Estimated Cost: \$25,000 (1993)
Estimated Time frame: annually
Estimated Cost Sharing: 0
Estimated Net Township Share: \$25,000 (1993) / \$125,000 over 5 years.

- ◆ **Complete an inventory of pedestrian/bicyclist trails and investigate possible connections between trails.**

Estimated Cost: (staff time)

Estimated Time frame: n/a

- ◆ **Initiate planning of detailed implementation schedule for Phase 2.** The implementation schedule shall consider priority projects, cost estimates, and funding sources.

Estimated Cost: (staff time)

Estimated Time frame: n/a

- ◆ **An annual Trail Plan status report to be prepared by Council, including updates on the status of Phase 1 work program items.**

Estimated Cost: (staff time)

Estimated Time frame: Annually

Implementation of the subsequent phases shall include an assessment of previous phase(s) to ensure the projects are being prioritized and implemented correctly relative to the level of resources available. A more detailed outline of activities for each subsequent phase will be established as part of the previous phase. The proposed activities for each phase will be reviewed by the Directors, Council and Community Teams.

Recommendations

- | |
|---|
| <p>29. That Phase 1 of the trails work program of the Community Connections: Planning Document for a Municipal Trail Network be supported.</p> <p>30. That a staff team and Trails Coordinator perform annual reviews of the work program and report to Council annually on the status of actions required to implement each recommendation in the Community Connections: Planning Document for a Municipal Trails network.</p> <p>31. That a staff team and Trails Coordinator monitor and report to Council as needed on a recommended implementation strategy for the remaining phases of the Community Connections: Planning Document for a Municipal Trail Network.</p> |
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Appendix One

Definitions

Trail: A trail is a specially designated pathway, sidewalk, or walkway located on a road or other form of public right-of-way. Most trails are built following approved design guidelines, legally signed for the exclusive use of non-vehicular traffic, and operated via a Trail Courtesy Code to promote cooperation between users.

Trail System: A Trail System is a series of looped and/or inter-connecting trails that form a continuous recreation and/or transportation route to a fixed destination, a series of destinations or areas having unique or specific features of recreational, historic, aesthetic, leisure and/or work related value.

Nature Trail: A nature trail is an off-road trail that provides trail users with opportunities to view the natural environment, including forested and un-improved areas.

User: A user pertains to pedestrians, bicyclists, equestrians and/or any other individual or group of people traveling on trails by non-vehicular travel means. Users for specific trails may include some or all of the foregoing, and are all bound by the Trail Courtesy Code.

Pedestrian: For ease of use, the term pedestrian is used to mean a number of user groups, including: wheelers (i.e. people who use wheelchairs), dog walkers, joggers, baby buggy strollers, walkers, and any other users that could be reasonably expected to use pedestrian type facilities.

Equestrian: This term refers to all types of horse riders.

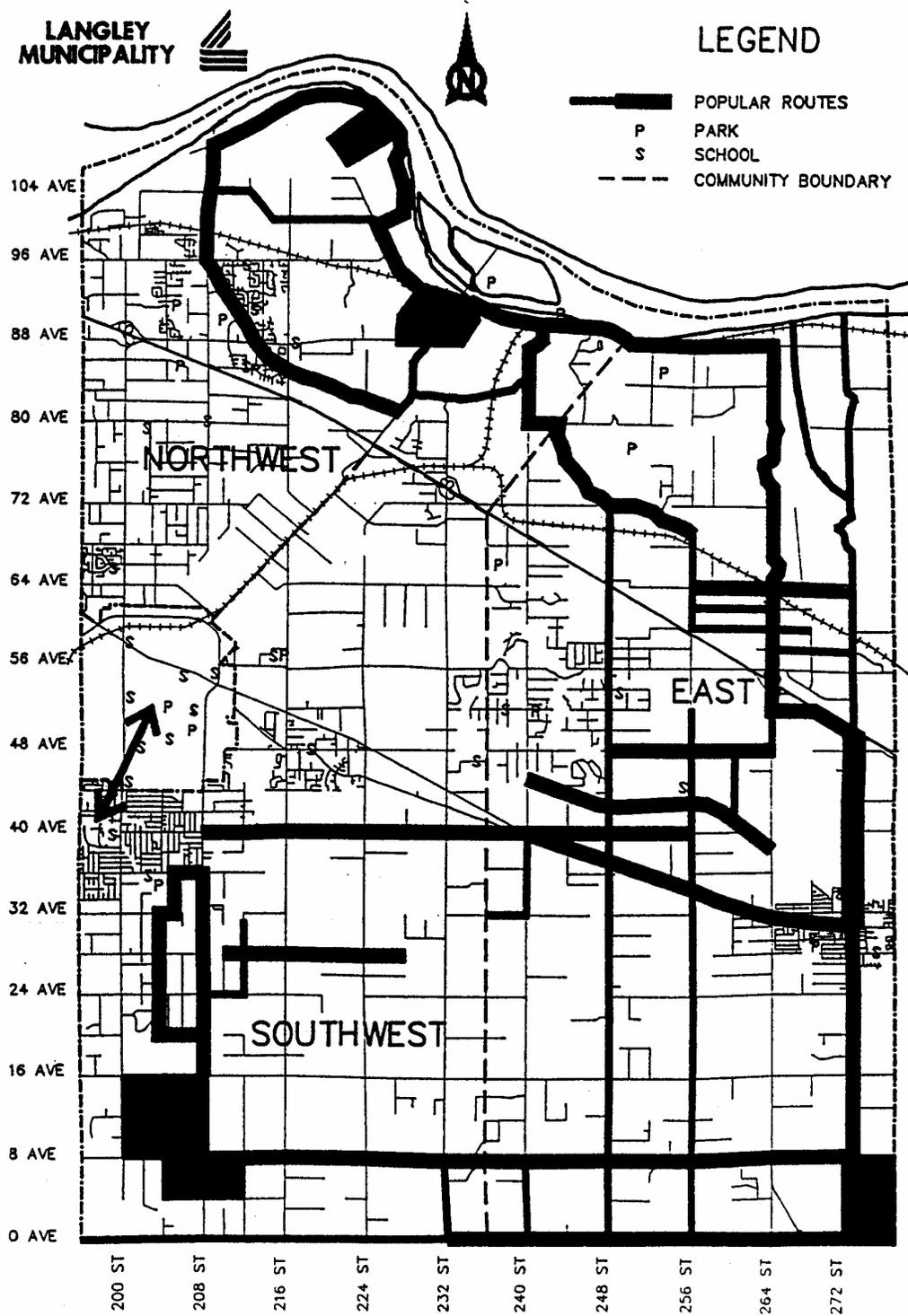
Bicyclist: This term refers to all non motorized bicyclists, including but not limited to mountain bikers, racing bicyclists, road bicyclist, unicyclists, and child bicyclists.

Shared Use: This term refers to trails that are used by more than one user type (e.g. equestrians, pedestrians and bicyclists).

Trail Heads: This term refers to a designated area located at convenient points around the trail system, where users can park cars and/or trailers while they use trails, and where trail map signs and brochures will be available.

Appendix Two

Popular Trail Routes (Questionnaire Responses)



Appendix Three

References

- Parks & Recreation Master Plan, Township of Langley, 1990.
- Langley Tomorrow Survey, Summary & Implications, Township of Langley, 1990.
- Township Corporate Mission Statement, Values, Goals & Work Program, Township of Langley, 1990.
- Engineering, Community Development Goals & Work Program, Township of Langley, 1990.
- Comprehensive Bicycle Plan, City of Vancouver, 1988.
- Draft Horse Trail Design Guidelines, GVRD Parks, 1992.
- Community Cycling Manual, Canadian Institute of Planners, 1991.
- Various Community Trail Plans & Brochures from around the GVRD
- Highway Design Manual, Ministry of Transportation & Highways, 1992.
- Willowbrook Community Plan, Township of Langley, 1992.
- Trail Questionnaire, Township of Langley, 1992.
- Trails Workshops, Township of Langley, 1992.
- Fort to Fort Trail Report, Township of Langley, 1993.
- Corporate Identity Manual, Township of Langley, 1993.
- Manual of Uniform Traffic Control Devices, Transportation Association of Canada, 1986.
- Evaluation of the Burke-Gillman Trail's Effect on Property Values and Crime, Seattle Engineering Department, May 1987
- Community Connections Team Meetings, Notes 1991 – 1993.
- GVRD Parks – Regional Trails Plan, 1992.
- | | | |
|-------------------|-------------|-----------------------|
| Highways Act | Chapter 167 | Section 1 |
| Municipal Act | Chapter 270 | Section 587, 1&2 |
| Motor Vehicle Act | Chapter 288 | Section 120, 1(b) (t) |
- Langley Township Country Roads, Identification & Maintenance Standard, Draft Report, November 1993.
- Langley Town Centre Plan, City of Langley/Township of Langley, Draft Report, June 1993.