# LOG TRAIN TRAIL REGIONAL PARK

## Management Plan

DRAFT – November 23, 2023

Alberni-Clayoquot Regional District

MDI Landscape Architects

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# INTRODUCTION

## Management Plan Purpose

Park management plans are guiding documents that set strategic direction, contain information on park values and threats and outline the objectives, strategies and priorities to guide how parks will be managed. Management plans include implementation plans that identify achievable short, medium and long term priorities that take into account the capacity and resources of Alberni-Clayoquot Regional District (ACRD).

The Log Train Trail Regional Park Management Plan will help guide operational and capital projects in the park over the next 10-20 year window and will replace the 1993 Regional Linear Park Management Plan.

Over time, the ACRD intends to prepare management plans for all its parks and trails. These documents, coupled with the Parks and Trails Strategic Plan, approved by the ACRD board of Directors in 2015, will help the ACRD plan and prioritize operational and capital budgets across the parks and trails system.

## Plan Area

While the Log Train Trail route in its entirety runs from south of Burde Street in the City of Port Alberni, generally northwest to Woolsey Road in Beaufort Electoral Area, this management plan is intended to address those areas of the trail that within the ACRD Lease area (Log Train Trail Regional Park), namely the most northerly section of the trail from Woolsey Road (KM 21) to just north of the powerlines (KM 3).

Due to the nature of the trail and its use and access patterns, the plan will also include goals and actions to help address important linkages and partnerships for the preservation and/or improvement of other areas of the trail.

## Planning Process Overview

The process to develop a management plan for the Log Train Trail Regional Park can be summarized in the following steps:

- Gathering of background information including a review of existing plans and policies, existing environmental, recreational & cultural values, etc.
- Initial engagement process – gathering information, ideas and suggestions from First Nations, other governments agencies, stakeholders, interest groups and the public.
- ACRD Board reviews Options Report
- Project team development of a draft management plan.
- Second engagement process – review of the draft management plan by First Nations, other government agencies, stakeholders, interest groups and the public.
- Project team reviews input received and finalizes the management plan.
- ACRD Board review and approval of the proposed management plan.

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## Glossary

The following definitions are used throughout this report:

Off-Road Vehicle (ORV): All-Terrain Vehicles (ATVs/Quads), Side-by-Sides and off-road motorcycles. Jeeps, trucks and other on-highway motor vehicles are excluded from the definition.

Log Train Trail Regional Park (LTTRP): The section of the Log Train Trail currently managed by the ACRD, namely from KM 3 (the powerlines) north to KM 21 (Woolsey Road). Also referred to as the Park, within the report.

Log Train Trail (LTT): The trail generally identified as the Log Train Trail running from the south of the City of Port Alberni at Burde Street to KM 21 (Woolsey Road), running either as a formal or informal trail through a variety of private, municipal or Crown lands, including the area currently managed by the ACRD.

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# CONTEXT

## Trail Description

The Log Train Trail is located within the traditional territories of the Hupačasath and Tseshaht First Nations. Generally following along the foot of the Beaufort Range, the Regional Park is within Cherry Creek and Beaufort Electoral Areas.

As a converted rail-trail, the trail is generally quite flat with two areas with steep grades (at Cold Creek and at the E&N Rail Crossing) and several bridges and water crossings, including one large wash out at Hal Creek. There is also one section that deviates from the rail grade and follows residential roads.

Due to the linear nature of the trail, there are a number of access points including directly from local roads and trails. Road connections within the lease area include Woolsey Road, Horne Lake Road/Desmond Road/Tahlen Rd and Cherry Creek Road. The most cited trail connections within the lease area include from McLean Mill and Bainbridge Road. Outside the lease area, there are road connections at Milligan Rd (to powerline), Mozart/Maebelle Roads and Lacy Lake Rd / Coombs Country Candy Store.

The trail provides an abundance of trail connections, most informal, and is generally used by trail users as part of a larger loop or route (for instance, as a connection up to routes in the Beaufort Ranges or to the mountain bike trail system (outside the lease area).

The trail is predominantly within second growth forests but offers occasional views of the valley and the Beaufort mountains. There are several areas that have been recently logged. These cut blocks leave the trail quite open and exposed but also provide opportunities for more expansive views of the valley and the Beaufort Range.

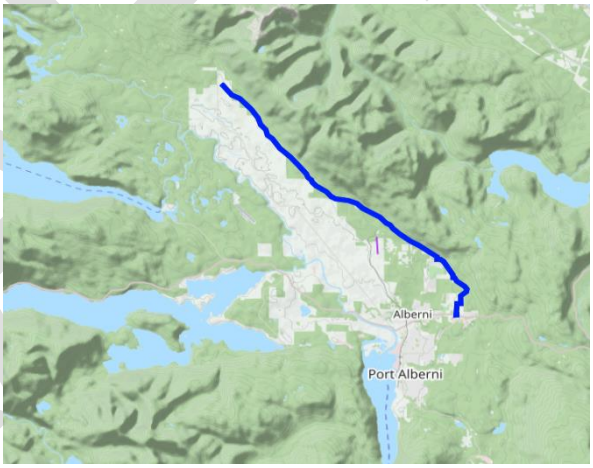


*Figure 1. Log Train Trail Context*

## Trail History

The Log Train Trail is located within the traditional territories of the Hupačasath and Tseshaht First Nations, part of the Nuu-chah-nulth Tribal Council. Peoples from both Nations have hunted, gathered and fished in the Alberni Valley since time immemorial. The forested areas were important, not only for hunting and gathering, but wood was harvested and/or carved for a variety of uses including long house construction, tool making and cultural and ceremonial practices.

The history of Port Alberni by settlers is predicated on the forest industry, and it is one of its key economic drivers still today. Logging railways were one of the most used methods of transporting timber in British Columbia in the early 1900s, particularly on Vancouver Island.

The Log Train Trail was originally part of the Bainbridge Mill logging operation, by 1925 a railway extended for about 7.2 km. The railway was abandoned until 1937, when H.R. MacMillian purchased the Alberni Pacific Lumber Company and timber rights in the Ash River Valley. A 25 km railroad line was built, using

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part of the Bainbridge Mill grade. The railroad was the mainline for MacMillan's rail logging operation, until it was abandoned in 1953, when logging trucks became the preferred method of transport. In 1984, the grade from Cherry Creek Pit to Woolsey Road was sold by MacMillan Bloedel to the Ministry of Transportation and Highway. Alberni-Clayoquot Regional District (ACRD) suggested that the grade could be used as a recreational corridor until such a time when a road was developed but there was no trail work completed.

In 1989 following discussion at an Equine Society meeting regarding the loss of riding trails in the area, Frank Stini brought forward the idea of reclaiming the overgrown, degraded rail grade as a trail and began discussions with ACRD, MacMillan Bloedel and the Ministry of Forests, the three ownership groups at the time. All parties were supportive of the project and work began. Preliminary work to open the trail was completed April 1, 1990. Over time, Cottage Industries Society and a long list of volunteers, including individuals and groups like the Equine Society, ADSS students, Girl Guides as well as businesses contributing time and materials, such as gravel or culverts, to complete trail improvements.

In 1993, the Log Train Trail: Proposed Regional Linear Park Management Plan was prepared with two primary goals: to designate the right-of-way as a regional linear park in order to establish a continuous trail from Woolsey Road at the north end to Highway #4 and then south of the Redford Extension to Burde Street; and, to generate public recognition of the trail as a Regional Corridor Park. In July 1993, the ACRD entered into a Lease for Recreational Use for those areas owned by the Ministry of Transportation and Infrastructure, the northernmost 17 kilometers of the right-of-way from KM3 (just north of the powerlines) to KM 21 (Woolsey Road).

## Trail Governance / Land Status

The Lease for Recreational Use is a revolving four-year lease that provides provisions for Tenant improvements related to its use as "an interim recreational trail within a park corridor". Only those buildings and structures related to use as an interim trail are allowed (i.e. pit toilets, bridges, culverts, signs and surface improvements subject to written consent of the Landlord. The trail is to be managed as per the provisions of the Lease and the 1993 Management Plan. The lease acknowledges that the "entire corridor is to be preserved for a future transportation network".

Private forest land woodlots and crown woodlots hold permits with MOTI for portions of the north end of the trail for forestry access purposes.

Outside the ACRD lease area, the remainder of the Log Train Trail connects through a variety of formal and informal trails on private, municipal, crown lands and/or municipal roadways south into the City of Port Alberni to Burde Street.

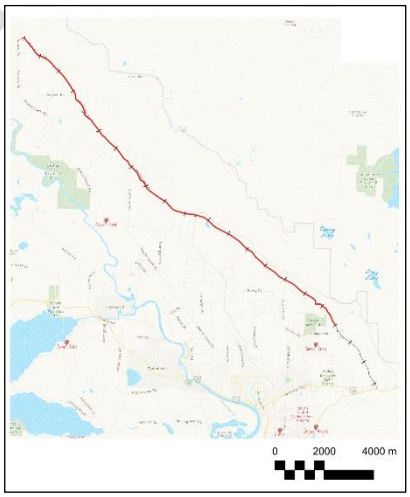

*Figure 2. ACRD Managed Section.*

## Neighbouring Lands / Zoning

At the time of management plan preparation, the ACRD is currently undergoing a Zoning Bylaw Review that includes new Zone abbreviations and names. Lands to the east of the right-of-way are currently predominantly zoned A-4 (new proposed zoning – Resource-RE) with two small sections (one at north end

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and one near Cherry Creek Road) zoned A-2 (new proposed zoning – RU2). On the west side of the right-of-way, lands are predominantly zoned A-3 (new proposed zoning - RU3), A-2 (new proposed zoning – RU2) or RA-2 (new proposed zoning – R2). A description of each of these zones is below. Current land use zoning uses the center of the right-of-way as a boundary, as such the trail itself falls within these multiple land use zones.

| CURRENT ZONING BYLAW | PROPOSED ZONING BYLAW | DESCRIPTION |
|---|---|---|
| A2 – Rural | RU2 – Rural 2 | Medium scale rural use and agriculture |
| A3 – Forest Rural | RU3 – Rural 3 | Large scale rural use and agriculture |
| A4 – Small Holdings | RE – Resource | Resource use (such as forestry and other natural resource extraction; permitted uses also includes parks and utility rights-of-way |
| RA2 – Acreage Residential | R2 – Residential 2 | Larger lot single family residential |

Adjacent forest lands are regulated by the *Forest Act* and by either the *Forest and Range Practices Act* and the *Private Managed Forest Act*, depending on the ownership status.

## Guiding Plans, Policies and Bylaws

The federal and provincial regulatory framework for the trail includes the following acts and regulations among others:

- *Federal Fisheries Act*: ensures work does not result in harmful alteration, disruption or destruction of fish habitat and prevents water quality issues affecting fish health.
- *Federal Species at Risk Act*: provides legal protection for species listed as extirpated, endangered or threatened.
- *BC Wildlife Act*: legislation that protects wildlife, including rare or endangered species and their habitats.
- *BC Water Sustainability Act*: protects the aquatic ecosystem, the hydrologic integrity of the stream channel, and the rights of water users and landowners downstream.
- *BC Weed Control Act*: protects the environment from the negative impacts of noxious weeds.

Primary regional/local government guidance for the Log Train Trail Regional Park is provided in Official Community Plans and the ACRD Parks and Trails Strategic Plan.

The ACRD managed portion of the Log Train Trail Regional Park lies within Electoral Area 'B' – Beaufort and Electoral Area 'F' – Cherry Creek. Objectives related to the trail in these OCPs include working with the City of Port Alberni, the provincial government, private landowners and local residents to develop an integrated network of multi-use trails, including the Log Train Trail. Policies within the OCP include provisions for providing an efficient transportation network that emphasizes non-motorized alternatives and encouraging non-motorized transportation to minimize greenhouse gas emissions.

The *ACRD Parks and Trails Strategic Plan (March 2015)* provides a comprehensive plan for the ACRD to guide park and trail development over a 10-year plan horizon. The mission provided in the plan is that the ACRD will work with all citizens to be good stewards of our environment, and to provide safe and welcoming opportunities to play, learn, contemplate and build community. Access to separate motorized and non-motorized recreational uses was identified in the plan as a key opportunity. The plan defines uses for

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Trails as non-motorized trail-based activities including walking, biking, horseback riding and cross-country skiing among others.

Other Alberni Valley initiatives that can help guide the management plan include:

*Alberni Valley Age-Friendly Plan (2020):* While the plan focuses on Alberni Valley residents who are 55 years and older, it considers all ages and abilities, as an age-friendly community benefits all peoples. Key items within the plan for consideration in relation to the Log Train Trail includes enhanced access points, smaller routes with signage and degree of difficulty (trail surfacing and steepness) and developing trail guidelines that respond to the needs of seniors and people with special needs, disabilities and/or mobility challenges.

## Active Transportation

Active transportation refers to all human-powered forms of travel. For some, active transportation can be recreation (i.e. a walk with friends), a form of exercise (i.e. a 5 or 10 km run), or a way of travelling to work, school or other destination either regularly or occasionally. Investments in active transportation can provide economic, health, environmental, societal and safety benefits.

The vision of Canada's *National Active Transportation Strategy* is that all ages, ethnicities, abilities, genders and backgrounds can safely and conveniently access active transportation in their communities and to increase the 'modal' share of active transportation.

BC's Active Transportation Strategy identifies three key pathways:

- Inspiring people to choose active transportation: it should be safe, easy and convenient to get around using active transportation.
- Connecting people where they need/want to go: the system should be integrated, safe and accessible.
- Working together and planning for the future: policy and planning should support integrated, comprehensive active transportation networks.

Development of this management plan was funded through the Canada Active Transportation Fund. The Fund seeks to improve community connections and promote social equity amongst vulnerable Canadians, make travel by active transportation easier, more convenient and enjoyable, and enhance user safety and security, encourage people to choose active transportation over personal vehicles, contribute to long-term, sustainable, inclusive economic growth, while setting the foundation for achieving a more inclusive Canada and net-zero climate emissions by 2050, and Support the Canadian economy through a reduction in congestion, the creation of jobs and enhanced access via active transportation modes to businesses.

Investing in active transportation for trail improvements provides residents and visitors with more opportunities for physical activity, improving quality of life and increasing the overall livability of the community.

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# INVENTORY AND SITE ANALYSIS

## First Nation Cultural Values

Log Train Trail Regional Park is located within the traditional territories of the Hupačasath and Tseshaht First Nations, part of the Nuu-chah-nulth Tribal Council. Peoples from both Nations have hunted, gathered and fished in the Alberni Valley since time immemorial. The forested areas were important, not only for hunting and gathering, but wood was harvested and/or carved for a variety of uses including long house construction, tool making and cultural and ceremonial practices.

Continuing to learn about, recognize and value traditional and current uses as well as important cultural sites or practices related to the lands associated with or adjacent to the Log Train Trail is a key management goal.

## Other Historical Values

The history of Port Alberni is predicated on the forest industry, and it is one of its key economic drivers still today. Logging railways were one of the most used methods of transporting timber in British Columbia in the early 1900s, particularly on Vancouver Island.

The Log Train Trail was originally part of the Bainbridge Mill logging operation, by 1925 a railway extended for about 7.2 km. The railway was abandoned until 1937, when H.R. MacMillian purchased the Alberni Pacific Lumber Company and timber rights in the Ash River Valley. A 25 km railroad line was built, using part of the Bainbridge Mill grade. The railroad was the mainline for MacMillan's rail logging operation, until it was abandoned in 1953, when logging trucks became the preferred method of transport.

## Natural Values

The Log Train Trail lies within the Coastal Western Hemlock biogeoclimatic zone (CWH), the predominant zone for the Alberni Valley as well as much of Vancouver Island more broadly. This zone is generally the rainiest biogeoclimatic zone in BC with anywhere from 1000 to 4400 mm of precipitation per year.

The Log Train Trail is within the Very Dry Maritime (CWHxm2) subzone. The forest is predominantly second growth timber, with a few relatively recent cut blocks. Predominant trees in this subzone include *Tsuga heterophylla* (Western Hemlock), *Pseudotsuga menziesii* (Douglas fir) and *Thuja plicata* (Western Redcedar). Predominant understory plants typically include *Gaultheria shallon* (Salal), *Mahonia nervosa* (Dull Oregon Grape), *Vaccinium parvifolium* (Red Huckleberry) and *Polystichum munitum* (Sword Fern). Plant composition within wetter areas includes *Thuja plicata* (Western Redcedar), *Rubus spectabilis* (Salmonberry), *Athyrium filix-femina* (Lady fern), *Acer circinatum (*Vine maple). *Lysichiton americanus* (Skunk cabbage) in very wet areas/depressions. In more open areas, *Acer macrophyllum* (Big leaf maple) and *Alnus rubra* (Red alder).

Black-tailed Deer, Black Bear and Gray Wolf are the most common large mammals. Other wildlife known to live within this biogeoclimatic zone are Cougar, Marten, Douglas Squirrel, Columbian Mouse, Southern Red-Backed Vole and Deer Mouse.[1]

[1] BC Forest Service Biogeoclimatic Ecosystem Classification Program.

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Red and blue listed species observed within 500 m of the trail include Euphyes vestris vestris (Dun Skipper) – butterfly, blue listed; Meconella oregana (white meconella) – vascular plant, blue listed; and, Githopsis specullariodes (Common Bluecup) – vascular plant, blue-listed.[1,2]

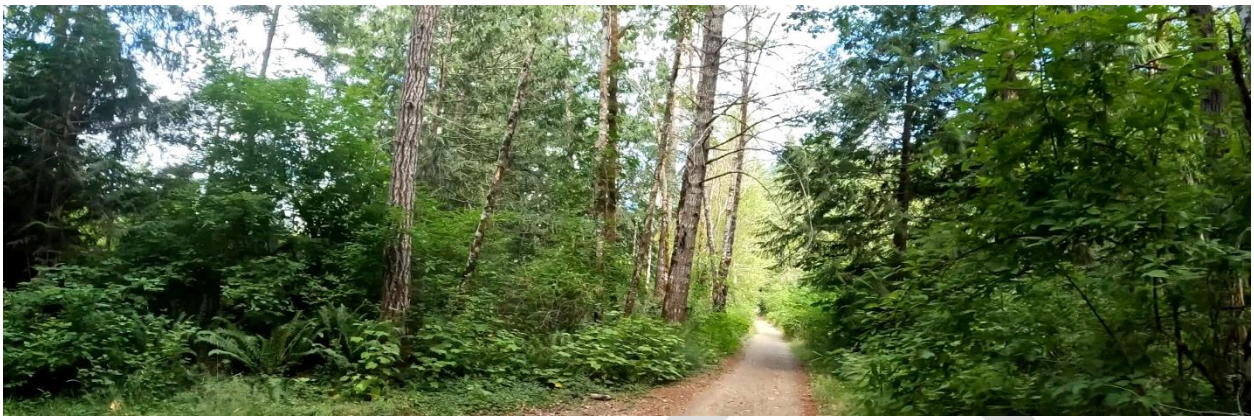

*Figure 3. Typical forested section of the trail.*

BC Invasive Alien Plant Program Map has several observances of Canada Thistle, Scotch Broom, Curled Dock, St John's Wort, Caraway and Daphne generally in association/near to existing roadways. There are also two sites south of Woolsey Road indicating Giant Hogwood observances that were previously treated.[3]

There are numerous fish-bearing streams that cross the Log Train Trail including Cold Creek, Cherry Creek, Deer Creek, Hal Creek and Kitsuksis Creek among others. Fish species include Steelhead, Cutthroat Trout, Rainbow Trout, Coho, Chinook and Chum Salmon.[4]

## Recreational Values

The trail is generally flat and well-graded, making it accessible and user friendly for a variety of ages and abilities along most of its length. However, several key barriers limit this accessibility along the whole route – Hal Creek washout, E&N Corridor (within lease area) and Cold Creek (outside lease area). The steep slopes and/or surface roughness in these areas are significant barriers to all but the most able-bodied.

*Figure 4. Steep slopes at E&N crossing.*

The Log Train Trail provides an abundance of trail connections, most informal, and is generally used by trail users as part of a larger loop or route (for instance, as a connection up to routes in the Beaufort Ranges or to the mountain bike trail system (outside the lease area). It links destinations such as the

[1] Province of BC HabitatWizard.
[2] BC Conservation Data Centre iMap (http://maps.gov.bc.ca/ess/hm/cdc/)
[3] Province of BC Invasive Alien Plant Program (IAPP) database and map display
[4] Province of BC HabitatWizard.

Roger Creek Trails, Cold Creek Falls, the Lookout, McLean Mill, Mt Hal, etc.) as well as a mountain biking trail network. Most of these trail connections are not currently formalized which makes installation of signage to assist with wayfinding challenging. Existing recreational amenities on the trail are limited but include some wayfinding signage at key locations; several interpretive signs, kilometer markers and two picnic tables.

The current trail lease with Ministry of Transportation for the Log Train Trail Regional Park section is for non-motorized uses, however, the trail is used frequently by Off-Road Vehicles (ORVs). In the Phase 1 survey, when asked what activities they enjoy doing along the Log Train Trail 49% of respondents indicated that they enjoy ATVing. 75% indicated walking, 48% indicated dog walking and 36% indicated biking – note respondents were able to pick more than one activity.

TRAFx Data

To better understand park use, the ACRD installed trail counters at several locations along the Log Train Trail including near the motocross park, Desmond Road, Mclean Mill and at Woolsey Road. The two charts in Figure 5 show average daily and annual traffic (all uses) at these four locations in 2022.

Two of these locations have counters that count just ATVs. A trail counter located on the trail near Desmond Road shows that, to date in 2023, ATV traffic accounts for just over 50% of all trail traffic.

Strava Global HeatMap

As part of our assessment of use patterns on the trail, we reviewed data available through Strava Global HeatMap. Strava is a popular app used by millions of runners, cyclists and others to track their activities. The Global HeatMap pulls public historical data from users and associated GPS coordinates to the app and displays segments of commonly traveled routes, creating a visualization of trail use/activity. While this map doesn't provide specific trail count data, it does provide an excellent visual resource to review use levels on various trail segments.

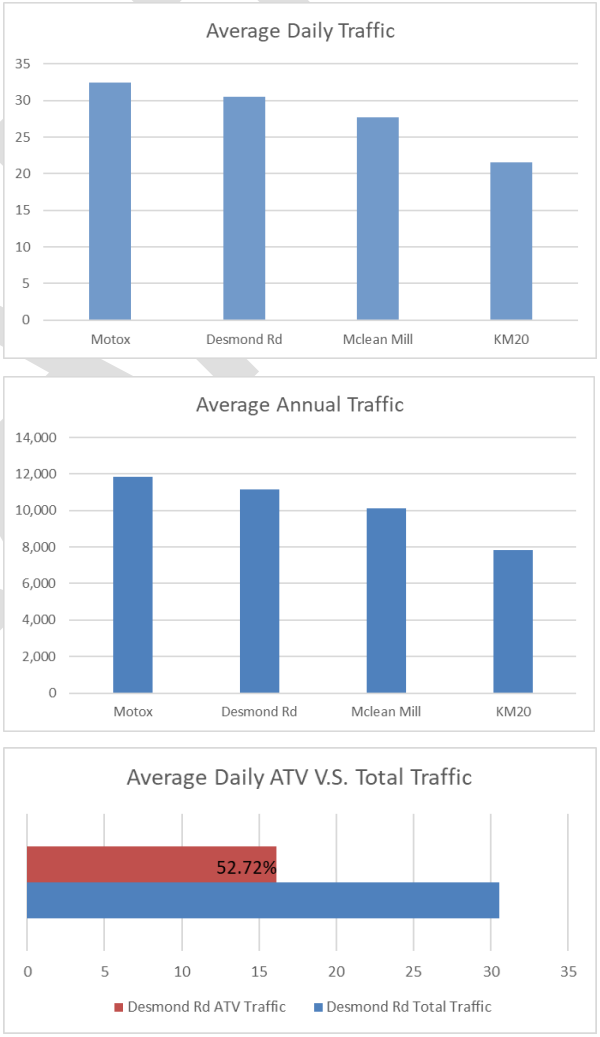


*Figure 5. TRAFx trail counter data.*

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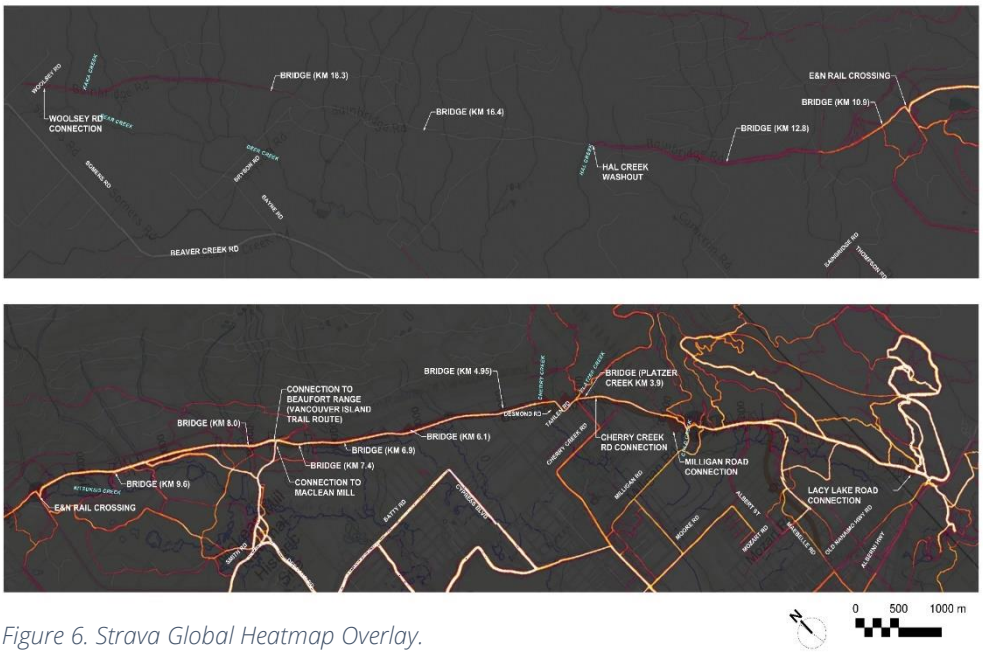


*Figure 6. Strava Global Heatmap Overlay.*

## Condition Assessment

In September 2022, as part of the site analysis work for the preparation of the management plan, MDI prepared a Condition Assessment. To prepare the assessment, MDI conducted field work on August 11 and 12, 2022 which included collecting georeferenced video data logs, georeferenced data point data for specific trail features and a visual assessment of tread conditions, trail typologies and general trail factors such as drainage, trail slope and crown/cross slope and usage patterns, where evident.

Th report summarizes the current condition of the tread quality from a material and drainage standpoint for the full length of the trail, including those areas outside of ACRD jurisdiction.

### Tread Condition – General Overview

As the trail is constructed on an old rail grade, the trail appears to have a solid base of well-graded material, ranging from larger rocks (approximately 4-6" in size) to fines. The larger rocks appear to be a lower course base material with smaller material on top. In general, this tread material is good for mountain bikes, gravel bikes, ATVs and hikers. This base material is exposed in many places due to surface erosion and may cause complaints due to trail surface unevenness. This issue, however, is easily repaired and the larger rock is overall an asset to the trail due to the stability it offers.

In some areas however, the well-graded tread material has eroded and become overly compacted with fines in specific areas causing drainage problems. Low spots observed in the 'Cut' sections of trail (see Trail Typologies below) appear to have little to no tread or base material remaining.

Entry points and intersections with roads, powerlines and trail connections have a mixture of tread materials, largely road crush or more uniformly graded rock. These materials tend to be looser and move around more readily than the well-graded tread found on the Log Train Trail.

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## Trail Grading – General Overview

Water and a poor drainage regime (in addition to use patterns) are the main cause of tread surface deterioration. Minimizing volume and flows along the trail surface will extend the life of the trail and help reduce maintenance needs. The trail longitudinal profile and cross section both affect the trail drainage and therefore the tread condition and can help identify primary areas for improvement.

As the Log Train Trail is constructed on an old rail grade, the longitudinal profile is generally quite flat with the exception of two key areas at Cold Creek (outside the ACRD managed section of trail) and the E&N Rail crossing. However, even on the seemingly flat sections, there are fine grade changes that create a series of high and low points affecting surface drainage. Understanding these detailed tread watersheds (areas that drain onto a specific area of trail) can help identify ongoing problem areas, typically aligned with trail low points, extremely flat areas, and areas with constrained drainage and/or poor drainage outlets.

## Trail Typologies

MDI observed two general trail typologies along the Log Train Trail:

Trail Type A: Raised or Cross Draining

This trail typology is generally benched into a slope and provides a raised, or half-cut conditions including a backslope of varying steepness with a free-draining downslope.

- Raised: Large swale or depressions upslope of trail with free-draining downslopes; Swales cross trail through culverts. In more confined areas, there are small swales directly adjacent to the trail.
- Cross Draining: No swale upslope of trail and free draining downslope. These are generally located in areas with less side slope or where there is not sufficient space for a swale. Cross draining sections do not include culverts.

Trail Type B: Cut

- This trail typology includes areas where the trail cuts through a berm. These areas were observed to be problematic due to the trail being the lowest point and a lack of drainage outlet. Drainage repairs have been completed in some areas to create swales along the sides of the trail. These help but may rectify the issue for long. These areas are often paired with tread issues like lack of adequate tread material and muddy conditions.

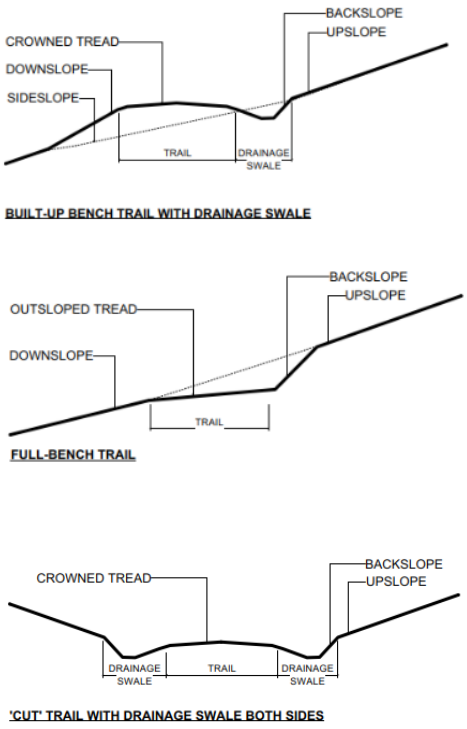


*Figure 7. Trail Type Cross Sections*

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Trail Condition Issues

Since the Log Train Trail is a linear trail located along a slope, the conditions are similar across many of the problem areas with varying degrees of severity. Several factors contribute to trail quality issues:

- Cross section: Drainage above and below the trail (Trails Type A and B).
    - Trail drainage: The trail itself should be either crowned or cross sloped for positive drainage. Over time, tread material becomes displaced and compacted creating low points within the tread. These are reinforced by use patterns and user groups that are harder on trails.
    - Drainage from above: The steepness and vegetative cover of the terrain above dictates how much water will reach the trail; and in a heavy rain event when soils are saturated, runoff is increased. This puts demand on the trail drainage system to function properly (i.e. allow water to cross the trail without causing erosion). Many trail sections have functioning swales upslope of the trail that connect under the trail through culverts, this is the ideal scenario but is not always possible.
    - Drainage below the trail: Where water free drains downslope of the trail (or is capable of free draining), trail repairs and upgrades will be effective and long lasting. A berm downslope of the trail creates a low point on the trail itself. The height of the berm dictates how easy it will be to mitigate the issue. Some areas have small berms where drainage can be rectified while others have large berms that present larger issues.
- Trail longitudinal drainage: Problem areas are extremely flat sections (<2%) and natural low points.
    - Flat sections: Flat sections make it difficult for swales upslope of the trail to drain across the trail without the help of deep swales and frequent culvert crossings. Where this is not possible, water must either accumulate in swales to infiltrate and/or drain across the trail in one way or another. As the trail itself has no ability to drain longitudinally, as tread becomes displaced by trail usage and erosion patterns, sitting water and potholes are created.
    - Natural low points: These areas are downslope of sections of trail that have positive longitudinal drainage and will always collect water more than adjacent areas. Improving cross slopes and crowns on along the length of the trail will limit the amount of water that drains to low points. However, over time as the tread becomes displaced and water runs down the trail, these natural low points will inevitably suffer first.

## Bridges and Culverts

There are a number of bridges on the Log Train Trail, most with wood decking. There have been a variety of studies and assessments conducted of the existing bridges. The most recent was completed in 2019 for four trail bridges located on the Log Train Trail between Desmond Road and McLean's Mill. Bridge and culvert inspections were not part of the scope of this project.

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# ENGAGEMENT

## Phase One Engagement

The first phase of engagement focused on collecting community feedback regarding existing park/trail use, existing conditions and possible management plan goals or actions and took place through Spring 2023 including the following activities:

| EVENT | DATES | PARTICIPATION |
|---|---|---|
| Stakeholder Interviews | October / November 2022 | 13 |
| Public Survey | November 8, 2022 – January 3, 2023 | 286 responses |
| Open House | December 4, 2022 | 65+ attendees |
| Public Workshop | March 26, 2023 | 64 attendees |

### Summary of Key Themes

Key themes that emerged from the stakeholder and public engagement are:

- Defining allowable uses: The largest topic from all the engagement inputs was around the types of uses allowed on the trail. There is very strong interest in legalizing motorized use on the trail. While ATVs use the trail currently, the existing lease with the Ministry of Transportation is for non-motorized use. Issues related to allowing motorized use were also noted – noise, speed, environmental impacts, etc. There were also some responses in the written answers on the survey and in correspondence that users did not want motorized uses on the trail.
- Leave it alone / keep it rustic and natural: In the written responses on the survey, many respondents wanted limited change or for minimal change in keeping with a rustic character and to not overly popularize the trail. There were also numerous written comments on the survey about protecting ecological resources including improved water crossings to minimize impacts.
- Volunteerism: The trail was developed and is predominantly maintained by volunteers, from all user groups, including motorized users. There is a strong desire for this to continue. While some felt that the ACRD should not be involved at all, most felt that there was a role for both parties to participate in ongoing trail maintenance and/or improvements. Key areas the community felt they could contribute was through work parties to improve the trail drainage and surfacing; and clearing debris after winter storms, etc.
- Connectivity and access: the trail serves as an important connector and formalizing connections outside of the ACRD lease area were frequently mentioned. The importance of the connection south of KM 3 (to the Alberni Hwy) and beyond (south of highway by Rogers Creek to Burde Avenue) was mentioned numerous times. Also mentioned frequently was the connections to the Beaufort Range and to the Historic Horne Lake Trail within the Regional District of Nanaimo. Other, more local connections mentioned included McLean Mill and Bainbridge Road, among others. There were numerous comments about better or more parking, at Mozart/Maebelle (outside ACRD lease area) and at Horne Lake Road/Cherry Creek Road.
- Signage / wayfinding and mapping improvements: Many respondents thought improved signage and wayfinding throughout the corridor was needed. This included both trailhead information and on trail signage such as kilometer markers. Many felt this should be consistent on all portions of

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the trail, including those outside the ACRD lease area. There was also numerous comments about needing improved mapping – as part of signage program as well as paper and online options.

A copy of the full engagement summary is attached to this report.

## Options Report

As there are numerous knock-on effects, such as bridge design, signage, etc. related to the allowable uses on the trail, an Options Report was presented to the ACRD Board of Directors for discussion purposes to allow the board to review a critical component of the management plan prior to its preparation. The four potential options included the following:

Option 1: Status Quo (Maintain current non-motorized use with no enforcement).
Option 2: Motorized Multi-Use
Option 3: Non-Motorized Multi-Use with Enforcement
Option 4: Divest Trail

Associated issues, opportunities and potential cost implications for each option were included in the report. The discussion by the board included the involvement of ATV users in trail maintenance/search and rescue; potential tourism opportunities; potential methods to minimize user conflicts (such as time limits, speed limits, signage, etc.), and potential risk/liability issues.

## Phase Two Engagement

The final phase of engagement focused on collecting community feedback regarding a draft management plan including the following activities:

| EVENT | DATES | PARTICIPATION |
|---|---|---|
| Stakeholder Emails / Correspondence | August 23, 2023 to September 15, 2023 | 15 emails sent<br>7 emails received |
| Public Survey | August 19, 2023 to September 15, 2023 | 242 responses |

### Summary of Engagement Responses

Communications were sent to representatives of Hupacasath and Tseshaht First Nations, along the with the Stakeholders identified in Round 1 engagement. The communications informed that a draft management plan was available for review and provided a link to the survey. A formal referral was also submitted to the Ministry of Forests as requested by the ministry. A copy of the draft plan was also sent to the Municipal Insurance Association of BC for review and comment.

In addition, staff and the consulting team received seven emails regarding the draft plan. Comments received via email included concerns regarding allowing motorized uses on the trail; support for motorized uses on the trail with some concerns related to summer fire safety; and, general support for improvements of the trail surfacing.

A public survey was available on the project website from August 19th to September 15th, 2023, which generated 242 responses.

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The majority of survey respondents agreed with the contents of the draft plan. 72% of respondents were in support of the proposed allowable uses with approximately 27% not supportive. This split in responses is reflective in the survey results related to the draft vision statement for the ACRD managed portion and support for the recommendations and priorities noted in the draft plan. There was strong support for the overall vision and the majority of the management plan goals.

A full summary of the results from all phases of engagement can be found in the Engagement Summary Report.

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# GOVERNANCE & ALLOWABLE TRAIL USES

One of the Log Train Trail Management Goals identified in the 1993 Regional Linear Park Management Plan is to "develop the corridor for multiple use, primarily non-motorized recreational trail, with some controlled use by ATVs and motorbikes with street legal mufflers". The existing lease with the Ministry of Transportation and Infrastructure (MOTI) is a non-exclusive lease for non-motorized use.

Given the linear nature of the Log Train Trail, it is used by a variety of user groups. All user groups (i.e. hikers, bikers, equestrian users, ATVers) have a long history of involvement in the development of the trail and continue to be involved by assisting with trail maintenance and/or monitoring (i.e. reporting downed trees after a storm). In addition, although the use is currently not allowed under the current lease, trail counter data shows that ATVs account for approximately 50% of trail use in some areas.

In the public survey, ATV use was the second highest activity mentioned after walking/hiking. (Note: respondents were able to select all activities they enjoy doing along the trail.) At the open house, the multi-use nature of the trail and whether it was for non-motorized use or should include motorized uses, was by far the most discussed topic area with related comments provided on almost all the open house boards.

At the public workshop, as well as through the discussion by the ACRD Board of Directors, there was indicated support for the management plan to explore a Motorize Multi-Use Approach. Adding ORVs as an allowable use would allow the ACRD to improve and maintain trail infrastructure for all existing users through trail infrastructure (i.e. surfacing, drainage, bridges, etc.) and minimize user conflicts through signage, speed controls and community building.

A preliminary discussion with MOTI indicated their openness to updating the lease to include motorized uses on the condition that the trail is designed and maintained to support the use.

ACRD to adopt the following allowable uses for the Log Train Trail Regional Park, specifically the section currently managed by the ACRD from KM 3 to KM 21:

- Non-motorized: Self-propelled users either by human or animal, including walking, hiking, running, equestrian, etc. This also includes the use of electric-assisted bicycles (e-bikes).
- Motorized: Off-road Vehicles (ORVs) including ATVs, side by sides and off-road motorcycles but not jeeps, trucks or other on-highway motor vehicles.

As other sections of the Log Train Trail are formalized, motorized uses should be considered on portions north of the Alberni Highway. Portions south of the Alberni Highway to Burde Street should be considered for non-motorized only.

Other motorized uses of the trail will be prohibited, except for operation, maintenance, fire protection or emergency reasons. In certain cases, public utility companies and adjacent landowners may use motorized vehicles on the corridor on a periodic, permitted basis, providing it does not negatively impact on facilities and users and any damage is repaired.

Prior to opening the ACRD managed portion of the trail to ORVs, there will be a period of transition required. This phase is outlined within the Recommendations section of the report and also included in the Implementation Plan.

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# STRATEGIC DIRECTION

## Vision

A vision statement is intended to express a desired future for the trail and act as a guiding statement for consideration when making future decisions about the regional park and trail. The management plan has identified two vision statements below, one for the Log Train Trail generally, and one for the specific section of the Log Train Trail Regional Park currently managed by the ACRD. These vision statements were developed based on public input, direction from existing or previous plans such as Official Community Plans, the 1993 Linear Park Management Plan and ACRD's Strategic Parks and Trails Plan.

***The Log Train Trail, from Burde Street to Woolsey Road, is an integral part of trail connectivity within the Alberni Valley and to locations beyond. Through access agreements and strategic partnerships, the trail provides a safe and enjoyable experience with seamless, well-signed connections at key locations for a variety of users of all ages and abilities.***

***Log Train Trail Regional Park provides a motorized multi-use experience for all ages and abilities. The park maintains its natural character while, over time, trail surfacing and drainage, signage and trailhead improvements are made. Partnerships help build community spirit and stewardship. The trail corridor is managed and operated in a manner that preserves, protects and provides education on its natural, cultural and historic resources.***

## Management Goals / Principles

In order to work towards the vision described above, the following management goals form a framework for the management plan:

Provide recreational opportunities for people of all ages and abilities by removing barriers and improving trail surfacing and drainage.

Develop enhanced trailhead facilities and trail connections with improved signage and wayfinding.

Recognize and celebrate Indigenous culture, ecological knowledge and presence on the land.

Protect and interpret environmental, historic and cultural resources.

Foster community stewardship of the trail and promote ongoing community involvement.

Work with partners to secure access in perpetuity for other sections of the Log Train Trail outside the existing ACRD lease area.

## Trail Concept Plan

The maps on the following pages provide a high-level summary and map of overall recommendations outlined in this plan.

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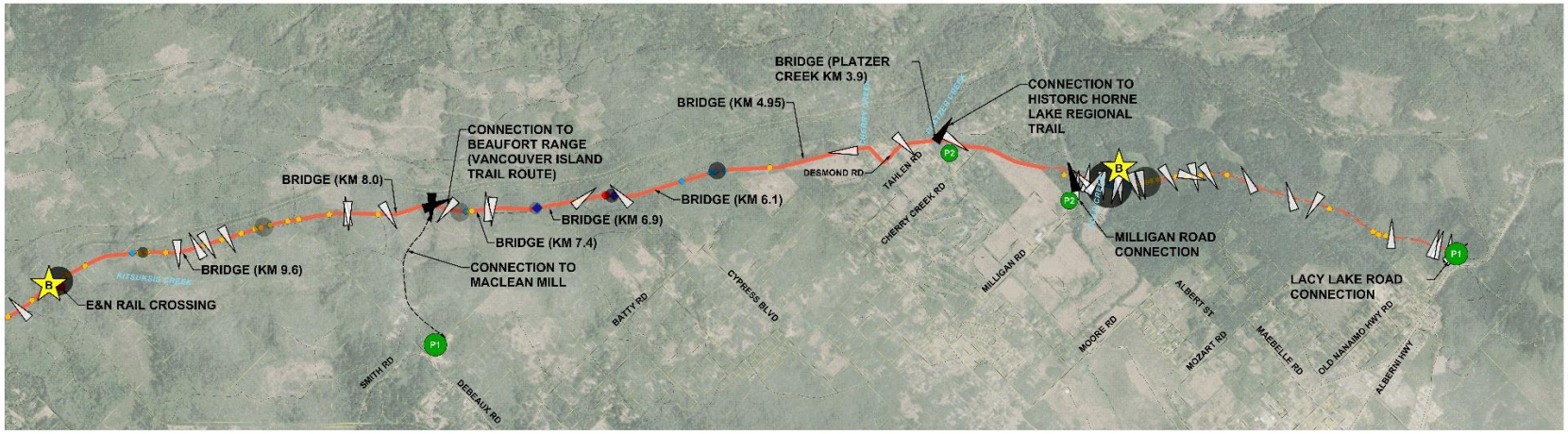
*Figure 8. LTT Concept Plan - South*

# LOG TRAIN TRAIL - KM 0 TO 10

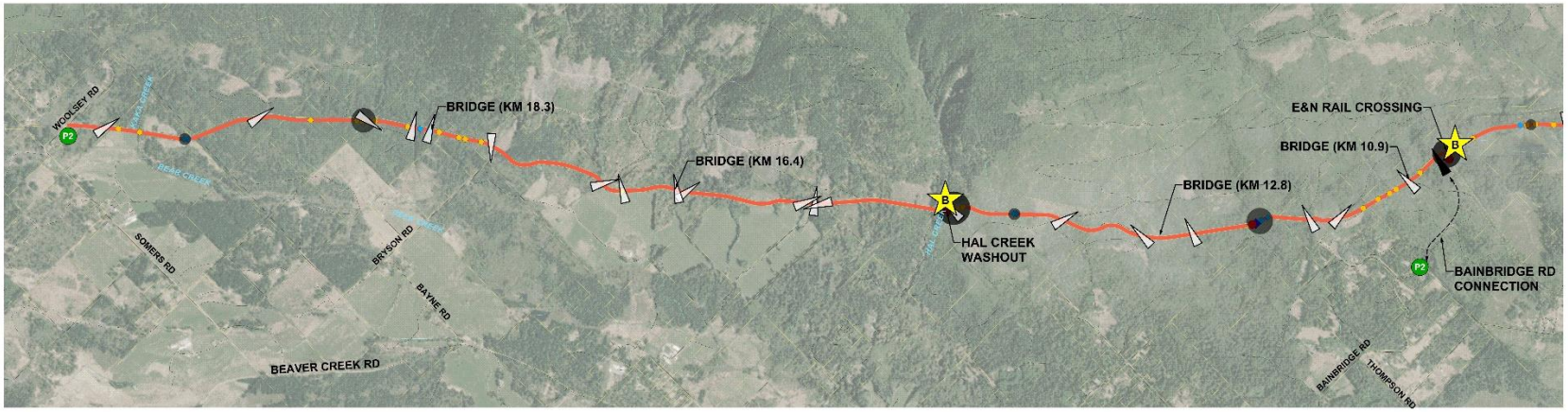



## LEGEND

| LINETYPES | CONDITION ASSESSMENT | MANAGEMENT PLAN |
|---|---|---|
| LOG TRAIN TRAIL | TRAIL / ROAD CONNECTION | PRIMARY CONNECTION |
| ACRD MANAGED SECTION | TRAIL SURFACING/DRAINAGE PROBLEM AREAS (POOREST CONDITION) | BARRIERS |
| STREAM | TRAIL TYPE A - KEY PROBLEM AREAS | TRAILHEADS - TYPE 1 |
| ROAD / LOGGING ROAD | TRAIL TYPE B - KEY PROBLEM AREAS | TRAILHEADS - TYPE 2 |

*Figure 9. LTT Concept Plan - North*

# LOG TRAIN TRAIL - KM 10 TO 21




## LEGEND

| LINETYPES | | CONDITION ASSESSMENT | | MANAGEMENT PLAN | |
|---|---|---|---|---|---|
| | LOG TRAIN TRAIL | | TRAIL / ROAD CONNECTION | | PRIMARY CONNECTION |
| | ACRD MANAGED SECTION | | TRAIL SURFACING/DRAINAGE PROBLEM AREAS (POOREST CONDITION) | B | BARRIERS |
| | STREAM | | TRAIL TYPE A - KEY PROBLEM AREAS | P1 | TRAILHEADS - TYPE 1 |
| | ROAD / LOGGING ROAD | | TRAIL TYPE B - KEY PROBLEM AREAS | P2 | TRAILHEADS - TYPE 2 |

# RECOMMENDATIONS

The recommendations below are intended to help guide operational and capital projects in the park over the next 10-20 year window. They are based on several sources of input including site analysis, background document review, ideas and input from stakeholders, the public, district staff and the Board of Directors.

## Indigenous History and Culture

The ACRD will continue to seek opportunities to learn about and collaborate with Hupačasath and Tseshaht First Nations on projects that acknowledge, communicate and celebrate their culture and language including cultural practices, ecological stewardship and their relationship to and presence on the land. Consider ways to incorporate indigenous language and art through interpretive signage, joint stewardship or other projects of mutual interest.

## Signage and Wayfinding

Alberni-Clayoquot Regional District and the City of Port Alberni jointly developed a Parks and Trails Signage Strategy in 2022. This plan outlines the goals and objectives for consistent signage throughout the parks and trails of the region with clear identification and directional signage and engaging interpretive signage to help improve the user experience and level of service, resulting in safer parks and trails and community cohesion. The sign types referred to in this management plan reference the following signage categories in the sign strategy:

- Sign Type 1: Major trailhead sign that includes map, trail etiquette and liability/park information.
- Sign Type 2: Minor trailhead sign that includes map, trail etiquette information and liability/park rules.
- Sign Type 3: Mid-trail directional signage; Wayfinding post with small, localized map and trail etiquette information.
- Sign Type 4: Mid-trail Distance Markers
- Sign Type 5: Interpretive signage

*Figure 10. Parks and Trails Signage Strategy*

A Log Train Trail brochure and/or map should be developed for the whole trail, from Burde Street to Woolsey Road. The map should include information on the existing safe connection route across Alberni Highway, using local streets. Brochure development should include review and approval by other landowners for the trail and may include a statement regarding the informal nature of portions of the trail (for instance: users should be aware that the trail south of KM 3 is outside lands managed by the ACRD and use is at own risk).

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## Access and Connectivity

### Trail Continuity and Barriers

Trail Continuity

The ACRD lease area extends from KM 3 (north of the powerlines), north to KM 21 (Woolsey Road). The section south of KM 3 to the Alberni Highway is a highly used section, that passes through lands owned by private forest companies and/or crown woodlots. Securing formal access to this portion of the trail is a priority for trail connectivity.

Where the trail uses the residential roads (Desmond to Horne Lake Road), ACRD should negotiate with adjacent landowners to re-establish a trail within the right-of-way. See map below.

*Figure 11. Desmond to Horne Lake Road.*

Trail Barriers

There are several barriers to trail passage, preventing access through certain areas for different user groups. Solutions to these issues should seek to meet the design recommendations set out in this document. Designers should be aware of accommodating all user groups at a moderate level of difficulty (see Trail Design Parameters section below).

There are four main barriers on the trail that will each require additional study in order to identify the solution:

- ORV connections: While ORV's are an allowable use on the ACRD managed section of the trail, they are not allowed on sections owned/managed by other parties to the south. Formalizing a connection point at the south end of the ACRD managed section will be needed.
- E&N Rail Crossing: Issues in this area include the steep slopes, the rail crossing itself and wayfinding issues.
- Hal Creek Crossing: The washout is not crossable during peak flows for most users. The small access trail is carved uphill, on private property and across the creek. There are also

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environmental and safety issues with the stream crossing (i.e. ORVs in the creek, trail surfacing for pedestrians, etc.)

- Cold Creek Crossing (outside ACRD lease area): Issues in this area include the steep slopes, environmental and safety issues related to the creek crossing as well as wayfinding issues on north side, approaching the powerline.

### Trailheads

Type 1: Parking Lots

The following location and parking lot types should be established as noted on the trail concept plan. A parking study should be completed to determine how many, and what type, of stalls will be needed.

- 1A – Main parking lots: Two main parking areas with trailhead facilities should be developed at McLean Mill and Coombs Country Candy Store / Lacy Lake Road.
    - Both these locations will require negotiation/agreement with adjacent landowners (Mosaic and McLean Mill) to share existing amenities/formalize access.
    - Parking should accommodate trailers for horses and motorized users and users with accessibility needs.
    - Signage in these locations to include Sign Type 1 (Large trailhead sign) and Type 5 (Interpretive signage) on a kiosk with a bulletin board. The bulletin board can be used by the community and the ACRD to post notices such as upcoming trail maintenance days.
- 1B – Secondary parking: Five locations at Woolsey Road, Bainbridge Road, Cherry Creek / Horne Lake Roads, Milligan Road and Mozart Roads.
    - These locations will require approval from the Ministry of Transportation as they will be located within road rights-of-way.
    - Bainbridge Road and Milligan Road would also require formal agreement for trail access to connect to the Log Train Trail from adjacent landowners.
    - These are roadside parking with gravel pull-off spots for single vehicles only.
    - Signage in these locations to include Sign Type 2 (Small wayfinding sign).

As these trailheads are developed, consider using bollards instead of gates to control trail access.

Type 2: Trail Connections

The Log Train Trail acts as a spine, connecting and providing access to other trails and trail networks in the region. Primary connections are as noted on the trail concept plan. Locations for trail connections in the trail concept are based on feedback from engagement and should be confirmed in the field.

- 2A – Primary trail connections: Several important trails connect to the Log Train Trail. Trails with connections to larger trail networks, such as to the Historic Horne Lake Trail, the Beaufort Range extent of the Vancouver Island Trail should be formalized and marked with Sign Type 2 (Small wayfinding sign) to provide a simplified regional map.

- 2B – Well established informal connections: Many informal trails connect to the Log Train Trail on both the east and west sides of the trail. With changing logging and development patterns, it is expected that the trails may move around over the years. However, some trail connections are well established access points and should be signed for general wayfinding purposes using Sign Type 3 (Wayfinding post).

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- If/when development shifts to the north, additional trail access points in the northern section will be needed. The ACRD should work on agreements to provide trail linkages where possible.

### Trail Design Parameters

Design parameters set out in the Trail Development Guidelines for Alberta's Public Lands[1] were used to inform the design parameters included in this plan. Trail design parameters are based on the most demanding user groups in combination with site conditions. As the trail is largely flat, straight and has a gentle cross slope, it may be narrower than is typically recommended for motorized users. The current trail width of 2-3 m is adequate and helps maintain lower speeds than if the trail was widened.

The design parameters outlined below are appropriate for most of the trail. Special study areas may need to modify these parameters slightly but should consider the needs of all user groups and provide mitigations as required (see the Trail Development Guidelines for Alberta's Public Lands for further guidance).

| Item | Design Parameter |
|---|---|
| Clearing Width | 3.0 – 4.0 m |
| Clearing Height | 3.5 m |
| Tread Width | 2.0 m (min), 2.5-3.0 m (ideal) |
| Bridge Minimum Width | 2.5 m (min) |
| Surface Type | Gravel |
| Protrusions | Occasional <0.1 m |
| Max Grade (short) | 10% (ideal), 15% (max) |
| Target Cross Slope | 3% |
| Max Cross Slope | 5% |
| Turning Radius | 3-5 m |

As the trail is just wide enough to accommodate a side-by-side, passing areas are recommended through highly trafficked sections, particularly in the southern portions of the trail. These locations, where people can step off the trail to let others pass, can double as a rest stop with a simple bench as needed or when possible.

While most of the trail already achieves these trail parameters, there are a few areas that do not provide the clearances indicated. As trail improvements for surfacing and drainage are undertaken, the trail should be modified to achieve these design parameters.

*Figure 12. Drainage and trail upgrades needed.*

[1] Alberta Environment and Parks. Trail Development Guidelines for Alberta's Public Land. 2019.

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## Accessibility

Outdoor recreation accessibility standards are less stringent than building and urban accessibility standards. The Parks Canada Design Guidelines for Accessible Outdoor Recreation Facilities[1] and the USDA Accessibility Guidebook for Outdoor Recreation and Trails[2] can be used as a guideline for specific design recommendations.

Surfacing

The surfacing found along most of the trail is accessible as it is firm and stable with little to no protrusions over 1-2". One section where uniformly graded rock was installed is not accessible. All surfacing should be well-graded gravel. See Trail Surfacing and Drainage section below for gravel recommendations. Uneven, muddy surfaces and sitting water on the trail impede accessibility. Regular trail maintenance should be prioritized to keep the trail usable for all user groups.

Slopes

The USDA Accessibility Guidebook for Outdoor Recreation and Trails recommends the following running slope and segment lengths:

| Running Slope | | Max. Length of Segment (between resting intervals) |
|---|---|---|
| Steeper than | But not steeper than | |
| 1:20 (5%) | 1:12 (8.33%) | 15 meters (50 feet) |
| 1:12 (8.33%) | 1:10 (10%) | 9 meters (30 feet) |

The majority of the trail is currently accessible by these standards with the exception of the barrier locations noted in the Trail Continuity section above. It is unclear whether it is possible for these areas to meet this standard, but it should be reviewed during the detailed studies.

Trail Amenities

Users with mobility challenges can typically maneuver steeper slopes for short segments, however, opportunities for rest before or after the slope are recommended. Benches at regular intervals, or strategically placed locations can increase the distance people with mobility issues can go. Since people with accessibility needs will generally start at parking lots, more benches should be located closer to parking and spread out as the trail gets further away from parking. For instance, benches could be spaced every 500 m for 1 km from each parking lot, then at 1 km spacing for 2 or 3 kms.

Trail parking areas should consider accessibility needs and provide accessible stalls and an accessible trail connection to the Log Train Trail.

[1] Parks Canada. Design Guidelines for Accessible Outdoor Recreation Facilities. 1994.

[2] US Department of Agriculture, Forest Service. Accessibility Guidebook for Outdoor Recreation and Trails. 2012.

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## Trail Surfacing and Drainage

Drainage Types

For a detailed description of the two drainage types, please see the Trail Typologies outlined in the Site Analysis section of this report.

- Trail Type A: These trail sections have functional drainage systems but need regular maintenance to maintain trail drainage due to displaced and compacted material from trail use. The maintenance of the cross slope or trail crown and adjacent drainage systems are required. Swales in areas where water often accumulates should be assessed and regraded for positive drainage to culverts. Small berms that accumulate on the downslope side of the trail may require removal. See Sections A-1 and A-2.

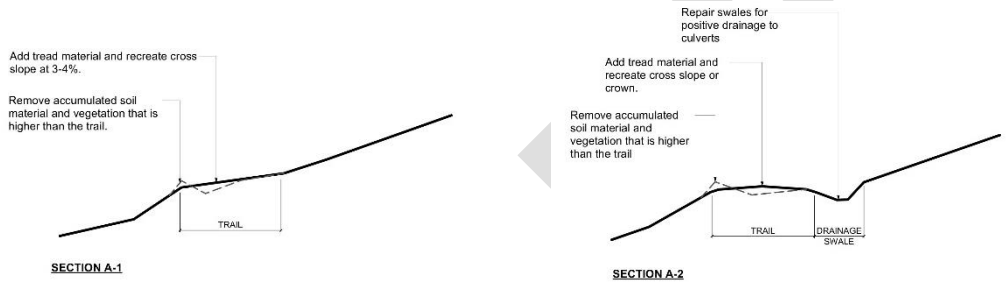


*Figure 13. Trail Type A Repair Cross Sections.*

- Trail Type B: These trail sections have problematic drainage as the trail is the lowest point and has no drainage outlet. The options outlined below are simple and effective. Additional drainage methods can be applied, however, maintaining a similar approach to issues across the trail is recommended where possible to simplify maintenance. Assessment and design by a civil engineer/landscape architect is recommended for larger projects.

  Where possible, install drainage points through berms. On smaller berms, drainage points may be dug into berms at regular intervals. A swale along the downslope side of the trail should be graded to drain to the drainage points. On larger berms, the ideal scenario is to install culverts through the berms. If this is not possible due to cost or equipment availability, see below. Water must drain positively across the trail to the swale and drainage points on the lower side. There are two options to achieve this depending on the size of the downslope berm.

  - B-1: To be applied in scenarios where creating positive drainage downslope of the trail is possible, either through digging channels through a small berm or through installing culverts in larger berms. Create a cross draining trail by filling swales on the upslope side of the trail and building up the trail tread to drain swales and drainage points on the downslope side of the trail.

  - B-2: To be applied in scenarios where creating positive drainage downslope of the trail is not possible. Install infiltration swales along both sides of the trail. Raise the trail well above the swales and create a strong trail crown (3.5% slope). A geotextile will likely be needed under the new tread to support the trail during saturated conditions.

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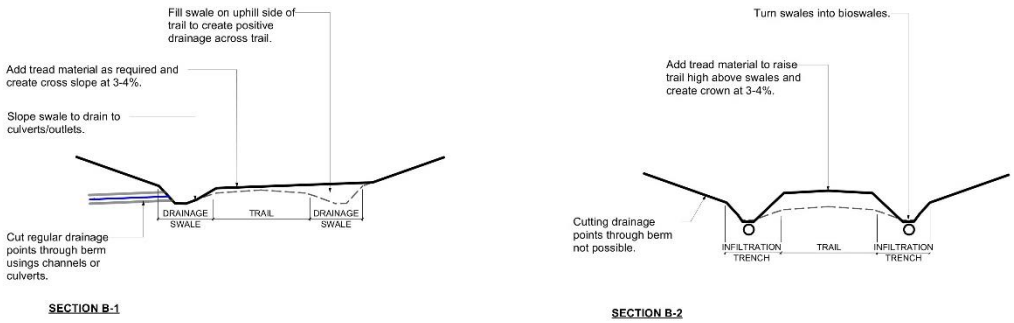


*Figure 14. Trail Type B Repair Cross Sections.*

Tread Material

Tread material recommendations outlined in the USDA Accessibility Guidelines for Outdoor Recreation and Trails[1] are outlined in Figure 13.

Trail mixes produced locally that meet these criteria will be adequate. Road base (3/4" minus) and evenly graded rock do not function as well for all user groups. Users with accessibility concerns, users on certain types of bikes, and others have more difficulty with larger rocks that are not embedded in a tight matrix of well-graded tread material.

**Construction Tip**

**Use better surface materials.**

Generally, the following materials are more likely to provide firm and stable surfaces:

- Crushed rock (rather than uncrushed gravel)
- Rock with broken faces (rather than rounded rocks)
- A rock mixture containing a full spectrum of sieve sizes, including fine material (rather than a single size)
- Hard rock (rather than soft rock that breaks down easily)
- Rock that passes through a ½-inch (13-millimeter) screen (rather than larger rocks)
- Rock material that has been compacted into 3- to 4-inch (75- to 100-millimeter) -thick layers (rather than thicker layers)
- Material that is moist (not soggy) before it is compacted (rather than material that is compacted when it is dry)
- Material that is compacted with a vibrating plate compactor, roller, or by hand tamping (rather than material that is laid loose and compacted by use)

*Figure 15. USDA Trail Surfacing Construction Tip.*

## Bridges, Culverts and Crossings

All bridges should meet user needs with a minimum width of 2.5 m and be designed to meet appropriate load requirements. A structural review to determine priorities for repair and replacement is required. Bridge replacement and repair will require sequencing and prioritization based on the structural review. Temporary hardened crossings may be installed through creeks to minimize sedimentation and bank erosion.

## Trail Amenities

Additional bench locations are described within the Accessibility section above. Other trail amenities that could be considered include adding a few picnic tables at strategic nodes, for instance at view points. No washrooms are contemplated at this time. Consider seeking formal agreement with nearby attractions/businesses for public access (i.e. McLean Mill and/or Coombs Country Candy Store) for public washroom access. If this is not possible, consider the inclusion of washroom facilities at Lacy Lake Road.

[1] US Department of Agriculture, Forest Service. Accessibility Guidebook for Outdoor Recreation and Trails. 2012.

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Garbage cans should be installed at trailheads as they are improved (see section above). Signage should include reminder to 'pack-in', pack-out'.

## Environmental

Forestry

Forestry is an important economic driver of the area with forestry activities located along and adjacent to the Log Train Trail. Forested areas allow for longer views and a sense of expansiveness along the trail but also minimize shade and can create uncomfortable solar exposure for trail users. They can provide an opportunity for interpretive signage on topics such as sustainable forestry activities and natural forest succession. Where possible, cut blocks on adjacent properties should be small and/or provide a protected buffer to the trail. Private woodlots currently have separate permits with MOTI for use of the Log Train Trail for access to cut blocks with interim closures during periods of logging activity.

Riparian Areas

All creeks and drainages along the trail should be protected from sedimentation. Four creeks were identified as problematic during site analysis included: Hal Creek, Platzer Creek (KM 3.9), Unnamed Creek at KM 11.5, Hal Creek (KM 14.3) and Cold Creek (KM 2.5 – Outside of existing lease area).

Vegetation

Vegetation along the trail is generally in good shape without any major concerns. Increasing the clearing width of the trail will require vegetation removal in a few areas. Replanting with low growing, hardy native species is recommended as required.

Wildfire Risk

All motorized vehicles should be required to carry fire suppressant. Fire suppressant may also be located at key entry points with wayfinding signage. Signs should include information about fire safety and hazard reduction. ACRD should continue to post caution signage at all their parks and trails during high-extreme fire risk.

## User Conflicts

Popular areas along the trail will have the most potential for user conflicts. The most common complaints were of speeding ORVs as well as relatively silent bikes/runners not alerting horses.

Trail etiquette should be outlined in signage including yielding, speed limits/reductions, and outlining varying user needs.

Speed Limits and Limiters

Speed limit signs can be posted along the trail. If the problem persists, anchors and corrals can be used to decrease speeds along the trail. The use of hardy, dense shrubs is recommended over boulders due to safety considerations.

Passing Zones

Passing zones should be installed wherever possible but especially through the busier trail sections to the south of the ACRD lease area.

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## Adjacent Lands

To minimize potential conflicts with adjacent landowners, trail facilities and signage will be developed and located to promote respect of private property. ACRD will not fence any common boundaries with adjacent landowners.

## Partnerships / Volunteerism

The Log Train Trail has a long history of volunteerism, from its initial creation to current practices of post winter storm clearing (as an example). There was a strong desire from the public for this to continue. Community maintenance days bring different user groups together, helping build relationships and foster understanding. The ACRD should develop maintenance agreements with interested trail groups to allow the groups to facilitate certain types of maintenance independently. This may include removal of fallen trees and other maintenance activities that do not require trail materials and larger equipment. Chainsaw safety certifications may be required to use chainsaws on the trail and should be considered while developing agreements.

Certain volunteer groups may be qualified to conduct certain maintenance projects like filling ruts and re-establishing trail drainage. These should be coordinated with the ACRD to ensure that the groups are supported by providing funding and materials and that design guidelines are followed. Larger projects should be undertaken by a qualified contractor.

ACRD should also seek to partner with other adjacent landowners and agencies to secure formalized access for other sections of the Log Train Trail, south to Burde Street, including opportunities to install signage and wayfinding for the trail route.

## Trail Maintenance / Level of Service

The ACRD has identified four different Levels of Service for its parks and trails. Log Train Trail Regional Park should be maintained at Level 3 standard of service which is defined as Low to Medium level of maintenance with the following typical parameters: maintenance performed monthly or in response to public complaints; limited and low maintenance infrastructure designed for less intensive uses; vegetation pruned or maintained for safety; and, debris or litter clean up in response to public complaint.

When trail usage increases, a higher level of service may be needed. A maintenance schedule should be developed that includes tasks for volunteers. Clear lines of communication between the ACRD and trail volunteers should be established. This could be through the development of a trail committee or other structure that meets the needs of the ACRD and community volunteers.

## Transition Plan

Modifying the allowable uses on the ACRD managed portion of the Log Train Trail will require some preliminary steps prior to legally allowing ORVs on the trail. Some of the items required include:

- Negotiate and execute a new lease agreement with MOTI.
- Engage with ORV user groups to ensure their involvement in implementation and communication strategies.
- Obtain any access agreements to allow for ORV access at KM 3
- Develop and implement a communications strategy to inform trail users of changes.
- Develop and install new trail signage that includes trail etiquette for sharing the trail.
- Modify trail gates (Woolsey Rd, Desmond Road, etc.) as needed to accommodate ORV use.

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# IMPLEMENTATION

Implementation of the ideas and directions within the management plan will occur over time as opportunities and funds are available. A flexible approach to implementation is needed as circumstances may mean that timelines need to be modified.

Implementation has been organized into three priority time frames, with some tasks identified as on-going. These categories are defined as follows:

- Short-term: Recommended to be completed in the next 0-3 years. In some cases, short-term actions must be completed prior to medium or long-term actions. These items are prioritized because they have the potential to have a high positive impact on the trail or are needed as a first step in phased implementation.
- Medium-term: Recommended to be completed within 3-6 years. Some of these items may require strategic planning and additional funding.
- Long-term: Recommended for consideration beyond six years or have more complicating factors that may delay implementation.
- Ongoing: Activities and improvements that will occur periodically and over time. Funding for these projects will need to be considered in annual budgets for maintenance and operations.

Planning level cost estimates are provided in the table below. It is important to note that these costs were developed using costs and quantities based on general assumptions from similar projects. Actual costs may vary widely due to site constraints such as access, design, market forces and other variables. Inflation is not included in the estimates.

| ITEM | TIMEFRAME | RELATIVE COST | CAPITAL ESTIMATE |
|---|---|---|---|
| **TRANSITION PLAN** | | | |
| Negotiate new lease with MOTI | Short | $ | Staff Time |
| KM 3 ORV Access - Access Agreements | Short | $ | Staff Time |
| Develop communications and signage strategy | Short | $ | Staff Time |
| Install new ORV related signage | Short | $ | $5,000 - $10,000 |
| Modify gates/trail entries at Woolsey Rd and Desmond Rd to accommodate ORVs | Short | $ | $5,000 - $10,000 |
| Implement communications strategy | Short | $ | Staff Time |
| **SIGNAGE AND WAYFINDING** | | | |
| Develop online map and trail brochure | Short | $ | $5,000 - $10,000 |
| Other signage improvements are noted below. | | | |
| **ACCESS AND CONNECTIVITY: TRAIL CONTINUITY** | | | |
| Access agreement w/ Mosaic and other landowners for KM 0 to KM 3 | Ongoing | $ | Staff Time |
| Schematic design / agreements to improve connection at Desmond/Tahlen Roads | Medium | $ | $5,000 - $10,000 |

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| ITEM | TIMEFRAME | RELATIVE COST | CAPITAL ESTIMATE |
|---|---|---|---|
| **ACCESS AND CONNECTIVITY: TRAIL BARRIERS** | | | |
| KM 3 ORV Access - Access Agreements | Short | $ | Staff Time |
| E&N Rail Crossing - Concept study & access agreements | Short | $$ | $10,000 - $25,000 |
| E&N Rail Crossing - Capital Improvements | Medium | $$ - $$$ | TBD (based on planning & schematic design) |
| Hal Creek Crossing - Engineering concept study | Short | $$ | $10,000 - $20,000 |
| Hal Creek Crossing - Capital Improvements | Long | $$ - $$$ | TBD (based on planning & schematic design) |
| Cold Creek Crossing (outside current lease area) - Detailed study | Medium | $$ | $15,000 - $25,000 |
| Cold Creek Crossing (outside current lease area) - Capital Improvements | Long | $$ - $$$ | TBD (based on planning & schematic design) |
| **ACCESS AND CONNECTIVITY: TRAILHEADS** | | | |
| Mclean Mill Parking Area - negotiate agreement w. Mclean Mill and Mosaic (for trail connection) | Short | $ | Staff Time |
| Mclean Mill Parking Area - signage/kiosk installation | Medium | $ | $5,000 - $10,000 |
| Lacy Lake Road Parking Area - negotiate agreement, parking design study | Medium | $ | $5,000 - $10,000 |
| Lacy Lake Road Parking Area - install signage/kiosk | Medium | $ | $5,000 - $10,000 |
| Woolsey Road Trail Entrance - trail improvements; install signage/kiosk | Short | $ | $5,000 - $10,000 |
| Woolsey Road P2 Parking Area - design, approval w/ MOTI | Medium | $ | $5,000 - $10,000 |
| Woolsey Road P2 Parking Area - construction | Long | $$ - $$$ | TBD (based on planning & schematic design) |
| Bainbridge Road P2 Parking Area - trail connection approval; parking study/design | Medium | $ | $5,000 - $10,000 |
| Bainbridge Road P2 Parking Area - construction | Long | $$ - $$$ | TBD (based on planning & schematic design) |
| Desmond/Cherry Creek/Horne Lake Rd P2 Parking Area - design, approval w/ MOTI | Medium | $ | $5,000 - $10,000 |
| Desmond/Cherry Creek/Horne Lake Rd P2 Parking Area: parking area improvement construction | Long | $$ - $$$ | TBD(based on planning & schematic design) |

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| ITEM | TIMEFRAME | RELATIVE COST | CAPITAL ESTIMATE |
|---|---|---|---|
| Milligan Road P2 Parking Area - design, approval w/ MOTI | Short | $ | $5,000 - $10,000 |
| Milligan Road P2 Parking Area - construction | Medium | $$ - $$$ | TBD (based on planning & schematic design) |
| Mozart/Maebelle P2 Parking Area - agreements and design | Medium | $ | $5,000 - $10,000 |
| Mozart/Maebelle P2 Parking Area - construction | Long | $$ - $$$ | TBD (based on planning & schematic design) |
| **ACCESS AND CONNECTIVITY: TRAIL CONNECTIONS** | | | |
| Wayfinding Signage at Trail Connections - KM 3 to KM 21 (ACRD lease area) | Short | $ - $$ | $10,000 - $15,000 |
| Wayfinding Signage - KM 0 to KM 3 (north of Alberni Hwy) | Medium | $ | $5,000 - $10,000 |
| Wayfinding Signage - Remainder (south of Alberni Hwy) | Medium | $$ | TBD (number of signs unknown, trail portion not assessed under plan scope of work) |
| Formalize trail access agreements for key connections (such as Historic Horne Lake Trail, Beaufort Range route of Vancouver Island Trail, etc). | Ongoing | $ | Staff Time |
| **TRAIL SURFACING AND DRAINAGE** | | | |
| Trail surfacing and drainage improvements | Ongoing | $-$$ | On Going |
| **BRIDGES, CULVERTS AND CROSSINGS** | | | |
| Updated assessment for culverts and bridges KM 3 to KM 21 | Short | $ | $5,000 - $10,000 |
| Updated assessment for culverts and bridges KM 0 to KM 3 | Medium | $ | $2,500 - $5,000 |
| Bridge repairs/reconstruction as needed | Ongoing | $$ - $$$ | TBD (based on updated assessments) |
| **TRAIL AMENITIES** | | | |
| Additional benches | Short | $$ | $25,000 |
| Additional picnic tables | Short | $ | $5,000 |
| Negotiate agreement for public use of existing washrooms | Short | $ | Staff Time |
| **USER CONFLICTS** | | | |
| Construction anchors and corrals as needed to mitigate speed issues | Ongoing | $ | On Going |
| Install passing zones as needed to mitigate issues | Ongoing | $ | On Going |
| **PARTNERSHIPS/VOLUNTEERISM** | | | |

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| ITEM | TIMEFRAME | RELATIVE COST | CAPITAL ESTIMATE |
|---|---|---|---|
| Develop trail maintenance schedule | Ongoing | $ | Staff Time |
| Develop formal volunteer program for trail maintenance | Ongoing | $ | Staff Time |

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