



**STRATHCONA  
COMMUNITY**  
HEALTH NETWORK

2019

# Tsa'xana and Gold River Transport Feasibility Study



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## STUDY BACKGROUND

The Strathcona Community Health Network, through the Strathcona Regional District, has undertaken this transport pre-feasibility study as the first step in providing improved transport services for the Mowachaht/Muchalaht First Nations based within the village of Tsa'xana, and for residents of the Village of Gold River.

A lack of transportation options has regularly been raised through community engagement as negatively impacting the well-being of children and youth in the area (Vancouver Island West Childhood Resiliency Report, March 2018). For residents of Gold River and Tsa'xana, having access to a private vehicle is necessary to undertake the approximately 180km round-trip to Campbell River to purchase food and household goods, and to access health and social services, among other things.

In May 2018, the Strathcona Community Health Network - in collaboration with the Gold River Children's Health Hub and Island Health Public Health - hosted a Transport Table in Gold River to discuss transportation priorities in Gold River and Tsa'xana. There was a cross section of stakeholders at the meeting, including representatives from the Village of Gold River, School District 84, the Strathcona Food Security Hub, the Stopping the Violence project, the Nuu-chah-nulth Tribal Council, the Gold River Early Years Table, and community members at large. It was at this meeting that the three projects that will form the basis of this pre-feasibility study were identified.

Later in 2018, an application was made to the BC Healthy Communities' PlanH Grant Program to secure funding to conduct a feasibility study to explore the three transport options. The PlanH grant application was successful and forms the majority of the funds for this project.

## STUDY OBJECTIVE

This pre-feasibility study considers the following three transport options as identified by the transport table in May, 2018.

- 1 Active transportation connection between Tsa'xana and the Village of Gold River
- 2 An inter-community shuttle service between Tsa'xana and the Village of Gold River
- 3 A regional shuttle service that would connect Tsa'xana and the Village of Gold River to Campbell River

The three transport options are discussed in order above, however this order is not reflective of the recommendations which are outlined below in Section 8.

The purpose of this feasibility study is to provide high level analysis of three previously identified transportation options and provide rough order of magnitude costs for each. These rough order of magnitude costs are intended to provide those involved with the potential implementation of these projects with a tool for considering the options best suited to the communities' needs. Additional considerations should include access to health care and general healthy lifestyle considerations when selecting the recommended transport service.

These rough order of magnitude costs should provide the transport table with information to consider and will help further the discussion around transportation services within the region. These high-level estimates can also provide a foundation from which to begin exploring further funding mechanisms for selected projects.

In addition to providing rough order of magnitude costs for each identified transport option, potential funding sources have been identified and are available in **Section 6**. The list is not exhaustive, and it is recommended that further funding research be completed if/when the transport table identifies their preferred transport option(s) as different opportunities may apply more directly once other service characteristics have been identified.

## COMMUNITY PROFILES

The Village of Gold River and the community of Tsa'xana are within the Strathcona Regional District on Vancouver Island, BC. Gold River is a small village with a population of 1,212, and is approximately 3.5 kilometers south east of Tsa'xana that has a population of 187, for a total of 1,399 (2016). From Tsa'xana it is another 95km to Campbell River, where additional health services, grocery stores, as well as other amenities and essential services are located. The communities of Tsa'xana and Gold River are accessed by Highway 28 (Gold River Highway) from Campbell River and Highway 19.

Currently there are no safe active transportation routes between the two communities. Those travelling by active means are required to use the roadway, much of which has no shoulder for refuge. The majority of the route is also used for commercial logging furthering safety concerns as pedestrians share the road with heavy duty vehicles. Currently most trips between these two communities and onwards to Campbell River are fulfilled by private vehicles either as a passenger or driver, hitchhiking, or other informal ride share service. This can add to lack of opportunities for all residents, especially children and youth living in Tsa'xana to access services within Gold River or beyond. Currently the only regular transport option between the two communities of Tsa'xana and Gold River is a school bus, however this bus may only be used to transport students to and from school.

Due to these factors residents face challenges such as accessing health services, purchasing essential goods such as groceries and other necessary household items, and decreased employment opportunities. Currently, community members from both communities rely on private modes of transportation, hitchhiking and informal ride sharing to travel within and between communities.

While transportation is a challenge within the region children, youth, and the elderly are likely more disadvantaged due to their decreased mobility options as they are more dependant on other members of the community for transportation. Poverty may also put these groups at a greater disadvantage. In 2016 Tsa'xana had a population of 187 residents, 60 of whom were below the age of 14, and 15 of whom were 65 years of age or older representing approximately 40% of the village's population. Interestingly, the portion of the population within Gold River (1,212) that meets these same demographic characteristics roughly aligns, with 39% of the population being between the ages of 0-14 (170) and 65+ (305).

The relative location of these communities is shown below in **Figure 1**. The relative distance to Campbell River is shown below in **Figure 2**.



Figure 1 Relative Locations, Tsa'xana and Gold River (5km to Gold River Village Core)



Figure 2 Relative Locations, Tsa'xana and Gold River to Campbell River (95km from Tsa'xana to Campbell River, 90km from Gold River to Campbell River)



## NEEDS AND OPPORTUNITIES

While the lack of transportation options has regularly been raised through community engagement as negatively impacting the well-being of children and youth in the area it is important to consider how residents are currently accessing essential services beyond those available within the area. To do so, a brief inventory was conducted to better understand the availability of essential services within the immediate area. Both access to health care and general healthy lifestyle impacts were identified as recommended areas of focus as they relate to transportation.

### 1 NEEDS

Five categories of 'health' were considered approach with access to health services such as access to health care which includes mental wellness and health focused programs, and healthy lifestyles which includes active living, healthy eating and social inclusivity. These 'health areas' should be considered as part of the decision-making process when identifying the recommended transport options.

#### 1.1 Access to Healthcare

Individuals from both communities are can access services at the Gold River Health Centre located in Gold River. The Centre provides primary health care, which includes care for illness and injury, chronic disease management, palliative care, and preventative care. There is an emergency room with nurses and doctor on call. X-rays, physiotherapy, mental health and lab services are provided once a week. Doctors and nurses are on call 24 hours a day, 7 days a week. However, home calls are not currently offered through this facility. Gold River Health Centre also provides prenatal and post-natal support and home visits, screening and referrals for post-partum depression, limited breastfeeding support and developmental screening for infants, toddlers and youth.

If a higher level of care is required, BC Ambulance will transport patients to Campbell River Hospital. Individuals in need of a specialist are required to book an appointment in Campbell River, or further, and if they rely on others for transportation must either arrange a ride with someone they know, or can be referred to Wheels for Wellness Society which provides transportation for residents of Vancouver Island to and from non-emergency appointments from Courtenay (140km from Gold River). As Wheels for Wellness is in Courtenay the long trips for drivers can restrict access to health services in winter during poor driving conditions, and if appointments occur early in the morning can result in additional costs to individuals who would have to spend the previous night in Campbell River. While this service is offered it is unknown how many trips are fulfilled through this program.

As reference, health programs at the Campbell River Health Unit include perinatal programs including breastfeeding support, and peer-to-peer or professional support groups for pre-natal or post-partum depression, among others. Child and youth programs include nursing support,

nutritional information, youth clinics and more. Medical offices, specialists, the regional hospital and other health related resources are also available in Campbell River.

Access to healthcare (health focused care) for purposes of service evaluation as it relates to health for these communities includes access to medical care (family doctors, dentists, etc.) and health programs such as those that focus on mental health, provide counselling services, or pre-natal and peri-natal support, among others.

## **1.2 Healthy Lifestyles**

Healthy lifestyles for purposes of this document include physical activity, food security, and social interaction. Different transport services address these health requirements in different ways and should be considered when identifying the desired transport option(s) for these communities.

## **2 OPPORTUNITIES**

Improving the well-being of children and youth in these communities will be an ongoing effort. However, the provision of transport options for all residents of Gold River and Tsa'xana is an opportunity to minimize this gap in access to health-related services.

To ensure residents are not solely relying on use of private vehicles to fulfill their needs, high-level exploration of the three identified transportation options is the first step; this is the intention of this report.

### **2.1 Active Transportation Connection**

An active transportation connection between Tsa'xana and Gold River has the potential to allow residents to actively travel between communities on a dedicated pathway which has the added benefit of increased physical activity. In addition, this route would provide a no-cost connection for its users. A roadside pathway, depending on its characteristics, could provide residents with the ability to experience nature with minimal environmental impact and can become a source of community identity and pride. While this connection could be a recreational amenity, it could also provide improved access to educational and recreational opportunities within Gold River as older students would not be entirely dependant on school bus services that do not accommodate extracurricular activities or other recreational endeavors. However, not all residents have the physical ability required to travel by active modes, may not feel safe doing so, and could face challenges in inclement weather.

### **2.2 Community Connection Shuttle (Tsa'xana – Gold River)**

Connecting these two communities with a reliable shuttle-type service would provide residents with an accessible and attractive transportation option, especially for families or individuals carrying groceries or other heavy loads.

A community-type shuttle service could also allow for families to travel between the two communities in approximately ten minutes, making this a more reasonable option for attending scheduled events and appointments. Shuttles also offer opportunities for social interaction and can help improve social connectedness, an indicator of a healthy lifestyle.

### **2.3 Regional Connection Shuttle (Tsa'xana – Gold River – Campbell River)**

While connections between the two communities offer critical links to education, health, and other services available within Gold River, greater connectivity to Campbell River offers improved access to additional services such as groceries, specialists, educational and recreational opportunities and programs, and entertainment. In addition, this transportation option could provide increased social connectivity between family members who may be working in Campbell River as it is a primary employment centre for the region, or to visit elderly family members who may not be able to remain in their homes due to lack of support services within Gold River. Regional transportation options are also important to reach other necessary appointments such as visitation, court, or other legal commitments. In addition, this shuttle could provide the opportunity for family members or other visitors to visit Gold River or Tsa'xana from Campbell River.

Both community-based and regionally-focused shuttle options offer valuable services to residents of the region and have the potential to improve overall community well-being.

### **2.4 Other Opportunities**

There are many approaches to improving the health of children in small, isolated communities. For instance, improving food security for these communities could help alleviate travel pressures for some residents. **However, the intention of this report is to provide high level, rough order of magnitude costs and considerations for the three transport options identified by the transport table.**

Providing affordable and accessible transportation for all members of a community, especially children, youth and their families, can positively impact the health and wellbeing of residents. Combined, these transportation options provide various levels of access to healthcare and support healthy lifestyles through different means. Ideally, the selected transport option(s) will support as many of the health-related focus areas identified above in section 4.1 as possible.

## PERFORMANCE DISCUSSION

### 3 OVERVIEW

Access to health care including medical care and health focused programs and the encouragement of healthy lifestyles such as active transportation, food security and social interaction are important considerations when exploring transport options for Tsaxana and Gold River. These considerations reflect the purpose of the PlanH Grant and reflect the concerns noted through engagement such as<sup>1</sup>:

- No available specialized care;
- No grocery store;
- No pharmacy on weekends;
- Seasonal work (1 parent working away, 1 at home alone);
- Lack of local communication (no newspaper, internet too expensive for some);
- Lack of education for parents; and
- Cost of getting to Campbell River (car and gas)

Each transport option will require investment. The rough order of magnitude costs presented here are indicative of the potential investment required but are very high-level estimates. To further refine these costs additional study will be required. The purpose of this report is to provide items for consideration to move the planning process forward.

### 4 COSTING

The three transport options provided prior to this study's commencement require varying levels of investment. For the purposes of providing rough order of magnitude costs we have assumed the acquisition of one wheelchair accessible, shuttle-type vehicle for the two shuttle-based transport options.

For the active transportation connection, we have assumed the route would predominantly follow Wickinash and Highway 28. Further descriptions of assumptions made are provided below for each option. The costs provided are very high-level and for conceptual comparison only among the three transport options.

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<sup>1</sup> Vancouver Island West Childhood Resiliency Project – Report of Finding. Community Identified Assets and Barriers, March 2018.

#### **4.1 Option 1: Active Transportation Connection**

The proposed route for this active transportation connection will follow along Wickkinanish from the intersection of Ghees-Muh and Wickkinanish along the east-side of the roadway closest to the village. This route would require people using the pathway to cross Gold River Highway on the west side of the Gold River bridge and back again once reaching the east side due to the pedestrian space along the bridge being on the south side and aligning with the west side of the proposed route. The east-side route was selected due to the costs typically being lower to build into an upslope and provide a retaining structure, rather than filling the downslope side. The pathway would follow Highway 28 to Nimpkish Drive in Gold River at which point a pedestrian crossing is recommended. The pathway could also be expanded to the Ray Watkins Elementary crossing or end earlier and connect into Peppercorn Park. For purposes of this study we have assumed the pathway will end at Nimpkish Drive as this location offers a sidewalk along the north side and therefor connections to Gold River's active transportation network.

This rough order of magnitude cost estimate has assumed a 2.5m wide gravel pathway along the route described above which stretches approximately 3.5km. These rough order of magnitude costs should be used for discussion purposes and may help guide budget planning but should be further refined as the proposed design is advanced.

- Cost estimates have been prepared using general knowledge of the site conditions without any geotechnical or topographic survey information;
- Unit rates have been derived from previous tenders on Vancouver Island where available;
- No geotechnical or environmental investigations or assessments were completed as part of this assignment;
- An allowance for retaining structure of 0.5m high have been included for the entire length of the pathway;
- Cost estimates do not include specific allowances for Mobilization, Survey Layout, Traffic Management, and Quality Management. The 40% contingency is assumed to account for these items; and
- Cost estimates include a 40% contingency, and 15% for Engineering and Project Management.

If the pathway was to widen to 3.0m and be paved for the entire length, the costs could be expected to be 1.25 – 1.5 times the cost of the proposed 2.5m gravel pathway.

- These rough order of magnitude costs do include estimated clearing and grubbing requirements, stripping, embankment full, retaining structure, and the walkway treatment itself. Contingency of 40% and Engineering and project management of 15% has been included. These assumptions result in a \$1300/m cost.

<b>Option 1: Active Transportation Connection</b>	<b>Cost Per Metre (\$)</b>	<b>Distance (M)</b>	<b>Total ROM Cost (\$)</b>
	1300	3500	4,550,000

Figure 3: ROM Costs, Active Transportation Connection

## 4.2 Shuttle Options

- The procurement of one vehicle has been assumed as adequate for both the community connections and regional connections shuttle service. Costs for shuttle type vehicles vary drastically from approximately \$12,000 for a used 12-15 passenger vehicle to \$150,000 for a new 22 passenger, wheelchair equipped vehicle. For the purposes of this report \$90,000 has been assumed for the procurement of the shuttle vehicle that will be used for both shuttle services. It is recommended that a wheelchair accessible vehicle be used for these services to ensure all members of the communities the shuttles serve can be accommodated.
- A regional shuttle service is likely to best address health-related considerations as shown below in Section 8.
- Based on procurement of a \$90,000 shuttle vehicle the estimated monthly costs would be approximately \$1500. This estimate includes:
  - 5% of the vehicle's capital cost per year for maintenance (\$4,000)
  - 5% of the vehicle's capital cost per year for insurance (\$4,000)
  - Ten-year amortization
- It should be noted that typically vehicles operating a transit type service have a service expectancy of nine years.
- This estimate does not include fuel costs, driver costs, administrative requirements, vehicle storage, or interest. Further assumptions for operational costs per trip are provided below for each shuttle service option.

- Typically, investment in transit type services are understood in cost per ride amounts. Without routing, scheduling, staffing, and vehicle purchase and maintenance information, among other necessary considerations a cost per ride amount is not available.
- Monthly cost assumptions are summarized in **Figure 4** below.

<b>Vehicle Considerations</b>	<b>Estimates (\$)</b>
Vehicle Procurement	\$90,000
Annual Maintenance (annual)	\$4,500
Annual Insurance (annual)	\$4,500
Ten-year amortization (annual)	\$9,000
Total Monthly Estimated Cost	\$1,500

*Figure 4: Monthly ROM Costs for Vehicle Operations and Procurement*

### **4.3 Option 2: Community Connection Shuttle (Tsa'xana – Gold River)**

The proposed route for this shuttle service would depart from the Mowachaht/Muchahlaht First Nation Administration Office and travel south along Wickkinanish to Highway 28 into Gold River. The route would terminate at Nimpkish Drive and Gold River Highway and has been identified only for rough order of magnitude cost purposes to identify distance for service and fuel assumptions. This route would be a 10km round trip and require approximately 20 minutes which does not consider layover time prior to its return trip.

The rough order of magnitude costs related to this route consider one hour of driver time at an hourly rate of \$23.00, and fuel required for this trip assuming 23L/100KM mileage and fuel costs of \$1.49/L. These costs are meant only for reference and will need to be further explored as the driver's position, and administration of this transport option are yet to be determined. Given these assumptions, without any consideration for the capital or operational costs of the vehicle the cost to provide one round trip from Tsa'xana to Gold River would be \$14.75 as shown below in **Figure 5**.

Option 2: Community Connection Shuttle (Tsa'xana – Gold River)	ROM Non-Capital Expenditures/ Trip		
	Fuel (\$1.49/litre)	Driver Time (30 min)	Total
	\$3.25	\$11.50	\$14.75

Figure 5: ROM Costs for Community Connection Shuttle (per round trip)

#### 4.4 Option 3: Regional Connection Shuttle

The proposed route for this shuttle service would depart from the Mowachaht/Muchalaht First Nation Administration Office and travel south along Wickkinanish to Highway 28 into Gold River with an in-town pick up, then continuing along Highway 28 to Campbell River terminating near the intersection of Mercroft Road and South Dogwood Street. This route has been identified only for rough order of magnitude cost purposes to identify distance for service and fuel assumptions. This route would be approximately 95km one way (180km round trip) and require approximately five hours which does not consider layover time prior to its return trip.

Option 3: Regional Connection Shuttle (Tsa'xana – Gold River – Campbell River)	ROM Non-Capital Expenditures/ Trip		
	Fuel (\$1.49/litre)	Driver Time (8 hours)	Total
	\$65	\$184	\$249

Figure 6: ROM Costs for Regional Connection Shuttle (per round trip)

As shown above in **Figure 6**, rough order of magnitude costs related to this route consider 8 hours of driver time at an hourly rate of \$23.00, and fuel required for this trip assuming 23L/100KM mileage and fuel costs of \$1.49/L. These costs are meant only for reference. Given these assumptions, without any consideration for the capital or operational costs of the vehicle the cost to provide one round trip from Tsa'xana to Campbell River, including a three-hour layover would be \$249.



## GRANTS AND FUNDING

**Appendix 1** outlines additional funding sources that could be utilized to address infrastructure and/or capital costs, feasibility studies and programming costs. These include grants from Indigenous Services Canada, Island Coastal Economic Trust, Union of BC Municipalities, Province of British Columbia, Federation of Canadian Municipalities. The cost-sharing, funding maximums, deadlines and potential stacking options will vary from grant to grant. The applicant for these grants could be Mowachaht/Muchalaht First Nations, the Village of Gold River, Strathcona Regional District, or a not-for-profit organization. If grant funding is pursued it is recommended that these entities partner and write letters of support for the additional required study and/or project implementation.

To help form the necessary partnerships the Regional Community to Community Forum (C2C) Program has been provided. The C2C program is used to increase understanding and improve relations between First Nations and local governments. The C2C program could be used to discuss the pre-feasibility study options and to sign a memorandum of understanding of partnership, or letters of support for the project.

To develop a business case, additional feasibility study, and capital/infrastructure, the BC Rural Dividend Fund (Province of BC) could be utilized. The BC Rural Dividend Fund is used for rural communities with populations of 25,000 or less to reinvigorate and diversify their local economies. The Rural Dividend Fund can grant \$10,000 for project development, \$100,000 to implement community-driven projects, or \$500,000 to support implementation of community-driven projects if the eligible applicant has at least one eligible partner. The pitch for the project would focus on making Tsaxana and Gold River more attractive places to live and work by improving access to food and health services. The next intake for the Rural Dividend Fund will be announced for this year, and there may be two intakes for 2019.

For further feasibility study, the Study: Transportation Network and Commuting Options (FCM) could be utilized. The FCM grant can be used to complete a feasibility study on transportation. The fund can provide 50% cost-sharing up to \$175,000. It is understood that the FCM grant is under-subscribed, which means it could be less competitive.

For capital purchases and programming funding the Community Gaming Grant could be used. The Community Gaming Grant is only eligible for not-for-profits (excluding local governments). Therefore, partnering with Wheels for Wellness or another not-for-profit within these communities would be necessary. The benefit of the grant includes up to \$100,000 dollars in programming funds, which allows up to \$20,000 be used for small capital expenditures. The Capital Projects Grant would also be applicable under the same eligibility conditions. However, the Capital Projects Grant would

give a maximum grant amount of \$250,000, but that must be 20 – 50 per cent of the total estimated project cost.

There are other grants listed on in **Appendix 1**. However, the aforementioned grants are the most applicable for the project.

## REGIONAL INITIATIVES

Within the Strathcona Regional District (SRD) is the Strathcona Community Health Network (SCHN). The SCHN brings people together with diverse backgrounds, roles and perspective to take on issues that impact health and well-being in the communities of the SRD. Their mission is to improve health and well-being in their communities. The pre-feasibility study arose out of the SCHN - Transport Table.

Neighbouring the SRD – SCHN, is the Alberni Clayoquot Health Network (ACHN). The ACHN has many successes including Wheels for Wellness that emerged out of a pilot project for medical transportation services in the region. The program’s ridership doubled in the first two months. In order to sustain the program the working group leveraged \$34,000 to purchase a van for the region.

The ACHN is also engaged with BC Transit to complete a Transit Feasibility Study for the five communities with paved road access. Finally, the ACHN also has a Regional Transportation Asset Map that documents the challenges of travel between rural and urban communities.

The SRD - SCHN could explore opportunities to partner with the ACHN to leverage funds and expand services. However, these Regional Districts cover considerable geographic areas, presenting challenges for improving transport through regional partnerships.

## NEXT STEPS

The purpose of this document is to provide members of the transport table with estimated high-level costs to consider as they relate to improving transportation options, and therefore access to healthcare and improved healthy lifestyle opportunities.

To aid the process of collaboration between stakeholder groups the regional Community to Community (C2C) grant could be utilized. C2C events are intended to provide a time and place for dialogue to build on opportunities, support reconciliation efforts, resolve issues of common responsibility, interest or concern, and/or to advance tangible outcomes. There are three intakes for 2019 and successful applicants can be awarded \$5,000.

The next steps would include meeting with the transport table to consider the best approach to addressing these communities’ transportation concerns. Evaluation of these transport options could consider the following criteria as described in section 4 and shown in **Figure 7**. Any

evaluation measures used should be agreed upon by all members of the transport table or another, more focused, stakeholder group.

	<b>Access to Healthcare (Health Focused Care)</b>		<b>Healthy Lifestyles</b>		
	Medical Care (Doctors, Dentists, etc.)	Health Programs (Counselling, pre-natal, mental health, etc.)	Physical Activity	Food Security	Social Interaction
<b>Option 1: Active Transportation Connection</b>	Partial	Partial	Yes	No	Yes
<b>Option 2: Community Shuttle</b>	Partial	Partial	Partial	No	Yes
<b>Option 3: Regional Shuttle</b>	Yes	Yes	Partial	Yes	Yes

*Figure 7: Health benefits of transportation options*

Based on the above criteria a regional type shuttle service would best address four of the five health focused consideration.

Should the transport table be interested in exploring any of these above transport options further, or alternatives to them, the next step would be to further explore the interest in these services from the community through targeted engagement and outreach. In the event none of the transport options are deemed feasible, alternative options should be identified such as a recreational/cultural off-road trail option, a smaller style shuttle vehicle, the establishment of a volunteer driver program, wheels for wellness service expansion, or other opportunities.

Ensure stakeholders are involved in the engagement process. Stakeholders could include the Mowachaht/Muchalaht First Nations, the Village of Gold River, members of the transport table, and others with jurisdiction in these projects should be added to a comprehensive stakeholder list and engaged throughout the planning process.

Responsibility for funding applications should also be identified and may depend on funding criteria. If a single transport option is selected for further exploration or implementation funding opportunities should be identified based on the desired design of the service.

## **4.5 Planning Process Steps and Considerations**

### **Option 1: Active Transportation Connection**

Focused feasibility studies may be a requirement of funding opportunities. A comprehensive feasibility study should be completed for the proposed active transportation route, or an alternative alignment should one be desired.

A trail or pathway feasibility report process could include the following:

- A start-up meeting with the project administrator including a site tour to help identify:
  - Site features and the characteristics of the corridor, or other selected alignment, and identify key issues and constraints
- Collecting base data and background information
  - This includes all available data from the Strathcona Regional District, Mowachaht/Muchalaht First Nation, Village of Gold River, Ministry of Transportation, etc.
  - Further data will be required for implementation of the pathway, however for additional feasibility a “desktop” review of available data could be sufficient.
  - Other data collection that could be included for planning and design purposes are: orthophoto, cadastral/legal, utilities (water, sanitary sewer, electrical – if any), topography, watercourses, etc.
- Develop Design Principles
  - These principles will ensure the pathway will meet the communities’ goals. This can include considerations for safety and security, accessibility, amenities such as educational kiosks, wayfinding, etc. These principles will directly inform the design of the trail. Any existing trail standards used within the Regional District should be referenced.

- Develop Design Criteria

Based on the communities’ goals and relevant pathway design guidelines across Canada and elsewhere appropriate design criteria will be confirmed including:

- |                                  |                       |
|----------------------------------|-----------------------|
| ○ Pathway width;                 | ○ Lighting;           |
| ○ Signage and markings (if any); | ○ Amenities; and      |
| ○ Surface materials;             | ○ Crossing treatments |
| ○ Grades;                        | (if needed).          |

- Prepare Base Plans
  - This will include high level mapping of the corridor
- Identify issues and constraints
  - These could include factors such as property impacts, utility impacts, ditches, environmental considerations, and drainage, among others.
- Prepare potential alignment and cross sections for each identified segment of the route which will provide conceptual understanding of pathway implementation. This information will provide a basis for future detailed design work. More than one concept may be useful for reference.
- Cost estimates should be developed based on recent construction pricing within the region
- A final pathway feasibility report should be provided in order to ensure all necessary information can be shared with potential funders if required.

### **Options 2 and 3: Shuttle Service**

The shuttle services as outlined above would likely require similar “next steps” in regards to engagement for the shuttle service planning process. Estimating potential ridership, revenues and cost structures including user fees (if any), and other metrics such as emissions reduction potential or health related benefits of the service, should be identified and further understood. However, based on the five health-related considerations included above a regional shuttle service would likely best address the communities’ health needs.

To maximize the required capital investment of a shuttle vehicle, service planning should aim to maximize the use of the shuttle vehicle – ideally accommodating the community connections and regional connections service if feasible.

The planning process could include:

- Stakeholder and community consultation to identify the communities’ needs and goals for the service
- Establishing potential partnerships or creating an MOU to formally demonstrate shared interests (industry, tourism, schools, health authorities, local governments, First Nations, etc.)
- Assess demand for the service through community consultation and identify recommended level of service
- Establish estimated ridership
  - Understanding the variation of demand throughout the day and/or week will help inform an appropriate service design that can best accommodate potential riders
- Estimate potential revenues and/or funding streams to help maintain the service, including partnerships
- Establish travel time based on proposed pick-up and drop-off locations and frequencies for the service
- Identify the recommended vehicle to meet service requirements and available funding
  - An important consideration in developing service concepts for shuttle services is maximizing the use of expensive capital resources by minimizing vehicle requirements and administration costs by operating one vehicle for both service routes. Combining services should be explored as part of a further feasibility study.

## SUMMARY

When considering transportation options that will best ensure access to essential services, especially those pertaining to health, it is important to remain focused on the purpose of the transport program. Scheduling, fares, and ridership accessibility, among other factors, should ensure health-focused services can be accessed by all members of the community including families and the aging population. While capital costs are an important consideration, health related values should not be overlooked. Medical care, health programs, physical activity, food security, and social interaction are some of the health-related benefits of the transport options explored within this report.

Considering these health-related benefits, it is likely that option three, a regional shuttle service, would best address the communities' health concerns. Rough order of magnitude capital costs for the service as it is identified above would be approximately \$90,000 for a new, wheelchair accessible, shuttle vehicle. High level estimates of ongoing maintenance and administrative fees are included in this report.

To ensure this initiative continues to move forward, the Transport Table should review and discuss the options listed within this report. Partnerships will be valuable throughout the funding, planning, design, and implementation processes and should be formalized early in the process. These partnerships should be well understood prior to funding applications as support and resources to prepare applications may be required.

This report addresses the three transportation options identified by the transport table. However, interim transportation options may provide more immediate response to the communities' concerns should resources not be available for the implementation of the transport options included here.

Should the transport table be interested in further exploring any of these above transport options, or alternatives to them, the next step would be to assess the level of interest in these services from the community through targeted engagement and outreach. In the event none of the transport options are deemed feasible, alternative options should be identified such as a recreational/cultural off-road trail option, a smaller style shuttle vehicle, the establishment of a volunteer driver program, Wheels for Wellness service expansion, or other opportunities.

All costs included in this report are very high-level and for conceptual comparison for the three transportation options identified by the transport table.

## APPENDIX 1: FUNDING TABLE

PROGRAM NAME	FUNDER	DESCRIPTION	DEADLINES	WEBSITE
<b>Community Opportunities Readiness Program (CORP)</b>	Indigenous Services Canada	The Community Opportunities Readiness Program (CORP) provides project-based funding for First Nation and Inuit Communities for a range of activities to support communities' pursuit of economic opportunities. Where First Nation and Inuit communities, or their representative organizations, identify opportunities and lack the financial resources to pursue them, the CORP will allow them to submit proposals to seek additional funding.	Ongoing	<a href="https://www.aadnc-aandc.gc.ca/eng/1100100033417/1100100033418">https://www.aadnc-aandc.gc.ca/eng/1100100033417/1100100033418</a>
<b>Economic Development Readiness Program</b>	Island Coastal Economic Trust	The economic development readiness program is designed to provide support for communities, First Nations and organizations as they move along the economic development continuum. The program has six focus areas. Find your fit from the options on the website. See complete EDRP program guidelines for further details.	Ongoing	<a href="http://www.islandcoastaltrust.ca/economic-development-readiness">http://www.islandcoastaltrust.ca/economic-development-readiness</a>
<b>Community Works Fund (Federal Gas Tax program)</b>	UBCM	The Community Works Fund (CWF) is delivered to all local governments in British Columbia through a direct annual allocation to support local priorities. CWF is based on a per capita formula with a funding floor, and delivered twice annually. Local governments make local choices about which eligible projects to fund and report annually on these projects and their outcomes. The CWF program will deliver an estimated \$519 million over the first five years to local governments.  Eligible investment categories include: local roads, bridges, highways, short-sea shipping, short-line rail, regional and local airports, broadband connectivity, public transit, drinking water, wastewater, solid waste, community energy systems, brownfield redevelopment, sport infrastructure, recreational infrastructure, cultural infrastructure, tourism infrastructure, disaster mitigation and capacity building	Ongoing	<a href="http://www.ubcm.ca/EN/main/funding/renewed-gas-tax-agreement/community-works-fund.html">http://www.ubcm.ca/EN/main/funding/renewed-gas-tax-agreement/community-works-fund.html</a>
<b>BC Rural Dividend Fund</b>	Province of British Columbia	The BC Rural Dividend is providing \$25 million a year to assist rural communities with a population of 25,000 or less to reinvigorate and diversify their local economies. It was developed to recognize both the contribution rural communities have made to B.C.'s economy, and the unique challenges they face to diversify beyond natural resources.  The program will contribute to the strength and sustainability of small rural communities, making them more attractive places to live and work. The program is focused on supporting worthy projects that help rural communities navigate changes impacting their economies, such as attracting and retaining youth, using innovation to drive economic growth, and developing new and effective partnerships to support shared prosperity.	Will have a 2019/2020 intake.  TBA	<a href="https://www2.gov.bc.ca/gov/content/employment-business/economic-development/support-organizations-community-partners/rural-economic-development/rural-dividend/program-details2">https://www2.gov.bc.ca/gov/content/employment-business/economic-development/support-organizations-community-partners/rural-economic-development/rural-dividend/program-details2</a>
<b>Age-Friendly Communities</b>	UBCM	The Age-friendly Communities program assists communities in BC to support aging populations by developing and implementing policies and plans, undertaking projects that enable seniors to age in place, and facilitating the creation of age-friendly communities.	2019 intake closed	<a href="https://www.ubcm.ca/EN/main/funding/lqps/age-friendly-communities.html">https://www.ubcm.ca/EN/main/funding/lqps/age-friendly-communities.html</a>



PROGRAM NAME	FUNDER	DESCRIPTION	DEADLINES	WEBSITE
<p><b>Study: Transportation network and commuting options</b></p>	<p>FCM</p>	<p>Funds feasibility studies of initiatives that may reduce pollution in Canadian communities by improving transportation systems and networks or encouraging people to switch to less polluting transportation options. This funding helps Canadian cities and communities of all sizes reduce energy consumption and greenhouse gas emissions (GHGs) and improve their air quality.</p> <p>Your study may compare several options or assess the capacity of one option to do at least one of the following:</p> <ul style="list-style-type: none"> <li>• Reduce the number of vehicles on the road, the number of kilometres they travel, or the amount of time they spend transporting people or goods</li> <li>• Get people to use their vehicles more efficiently or switch to less polluting forms of transportation (i.e., a modal shift to public transit, walking, or cycling).</li> </ul> <p>Grant: Up to 50% of eligible costs to a maximum of \$175,000</p>	<p>Ongoing</p>	<p><a href="https://fcm.ca/en/funding/gmf/study-transportation-networks-commuting-options">https://fcm.ca/en/funding/gmf/study-transportation-networks-commuting-options</a></p>
<p><b>Regional Community to Community Forum Program</b></p>	<p>UBCM</p>	<p>The goal of a Regional C2C Forum is increased understanding and improved overall relations between First Nations and local governments. Forum events are intended to provide a time and place for dialogue to build on opportunities, support reconciliation efforts, resolve issues of common responsibility, interest or concern, and/or to advance tangible outcomes.</p>	<p>Mar 15, 2019 Sept 13, 2019 Dec 6, 2019</p>	<p><a href="https://www.ubcm.ca/EN/main/funding/lqps/community-to-community-forum.html">https://www.ubcm.ca/EN/main/funding/lqps/community-to-community-forum.html</a></p>
<p><b>BikeBC Program – Cycling Infrastructure Funding</b></p>	<p>Province of British Columbia</p>	<p>Eligible projects include those that encourage transportation cycling by accelerating the development of cycling infrastructure. The focus of the BikeBC program is on cycling for transportation purposes which includes cycling trips to and from work, school, tourism and errands.</p> <p>Small communities (communities with population of 15,000 or less) with <b>no existing cycling network plan</b> are eligible to apply for cost-sharable funding (up to 50% of the total eligible costs) to develop a formal cycling network plan. Expenses for successful network planning projects will be reimbursed upon completion and adoption of the plan. You do not have to apply for cycling infrastructure funding in order to be eligible to apply for cycling network funding.</p>	<p>2019/20 Intake is closed</p>	<p><a href="https://www2.gov.bc.ca/gov/content/transportation/funding-engagement-permits/funding-grants/cycling-infrastructure-funding">https://www2.gov.bc.ca/gov/content/transportation/funding-engagement-permits/funding-grants/cycling-infrastructure-funding</a></p>
<p><b>Community Gaming Grants</b></p>	<p>Province of British Columbia</p>	<p>Community Gaming Grants support eligible not-for-profit organizations that deliver community programs that benefit the citizens of British Columbia.</p> <p><i>Human and Social Services:</i> how the program helps improve the quality of life in a community or group, supports children, families and/or seniors, provides public access to community services, supports gender equality or marginalized people, or benefits Indigenous communities.</p> <p><b>Local organizations:</b> up to \$100,000 per year <b>Regional organizations:</b> up to \$225,000 per year</p>	<p>July 1<sup>st</sup> to Aug 31<sup>st</sup>, 2019</p>	<p><a href="https://www2.gov.bc.ca/gov/content/sports-culture/gambling-fundraising/gaming-grants/community-gaming-grants">https://www2.gov.bc.ca/gov/content/sports-culture/gambling-fundraising/gaming-grants/community-gaming-grants</a></p>
<p><b>Capital Project Grants</b></p>	<p>Province of BC Community Gaming Grants</p>	<p>Each year a portion of the \$140 million Community Gaming Grants program budget is allocated to capital projects undertaken by not-for-profit organizations that have a total cost of more than \$20,000. The purpose of the sector is to enable the not-for-profit organizations to complete capital projects that provide significant benefit to communities.</p> <p>Viable capital projects that are primarily for community benefit and are accessible to the public will be considered in three categories:</p> <ul style="list-style-type: none"> <li>• Acquisitions: the purchase of fixed capital assets for long-term use, including vehicles and equipment.</li> </ul>	<p>June 1<sup>st</sup> to July 31<sup>st</sup>, 2019</p>	<p><a href="https://www2.gov.bc.ca/gov/content/sports-culture/gambling-fundraising/gaming-grants/capital-project-grants">https://www2.gov.bc.ca/gov/content/sports-culture/gambling-fundraising/gaming-grants/capital-project-grants</a></p>