



# Use of Off-Road Vehicles on County Roads

Executive Summary  
Draft for Comment – November 2021 (March 2022)



## Introduction

The **Use of Off-Road Vehicles on County Roads Report** documents the findings of the County of Peterborough Off-Road Vehicle (ORV) By-law (No. 2016-35) review completed as part of the County's **Transportation Master Plan Update**. The review included technical analyses and consultation with a broad range of interested parties, the findings of which served as the basis for the recommended strategy presented in the report.

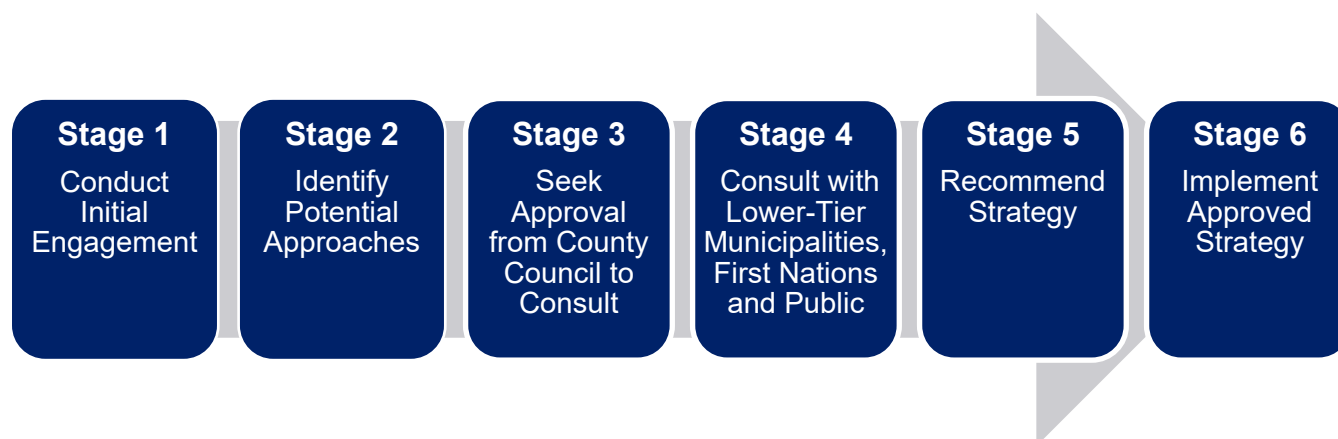
## Existing Off-Road Vehicle Routes

**Figure ES.1** shows the existing off-road ORV trails in Peterborough County. The current network does not connect across the County, with only a few routes available in the northwest and southeast areas for travel. In most cases, users must trailer or drive their ORVs on public roadways to reach trails. As such, access to roads is very important to riders.

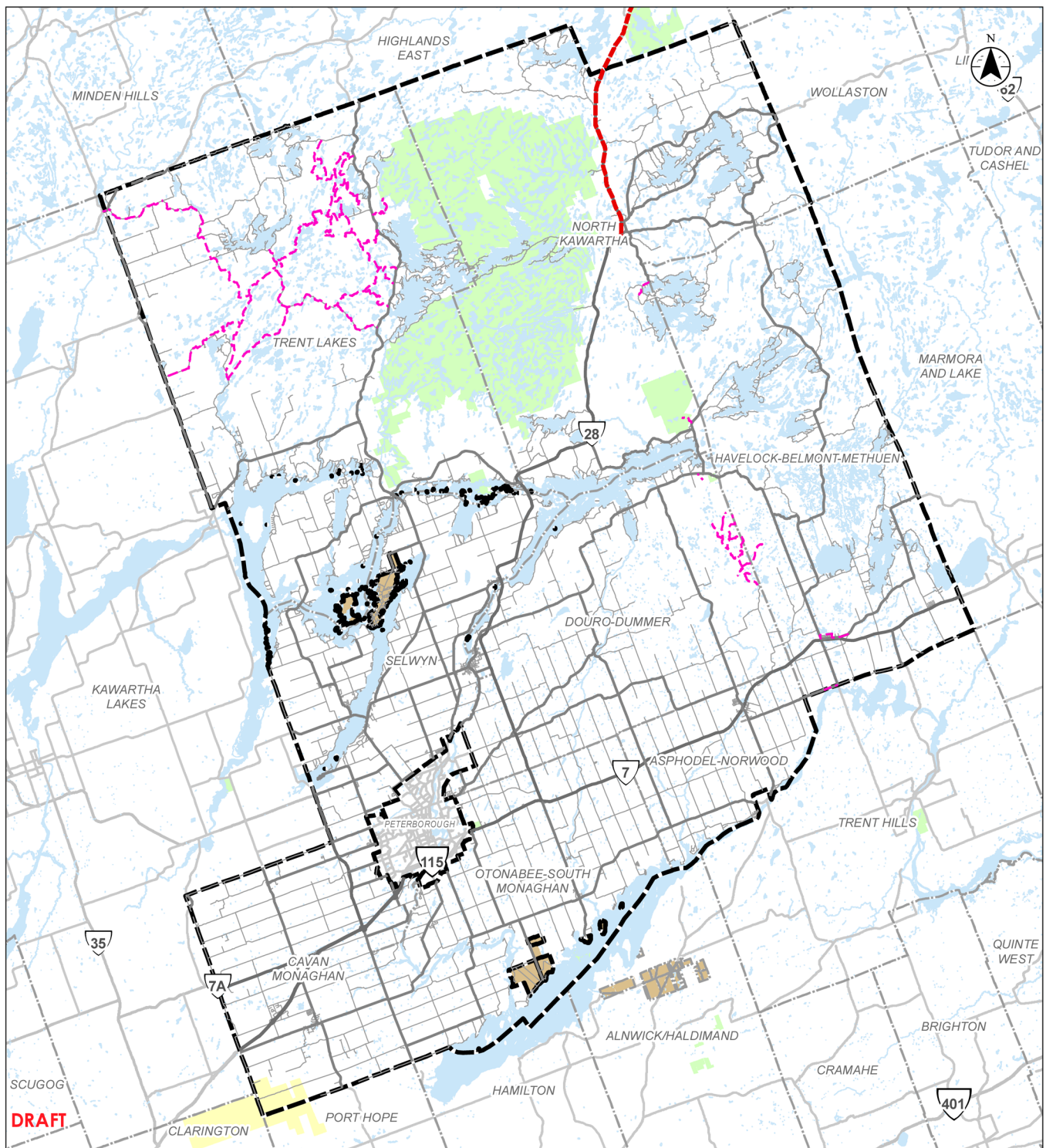
The current County ORV By-law (in Schedule A) limits use to 11 County Road sections in the Township of Havelock-Belmont-Methuen, as shown in **Figure ES.2**. Many of the County's lower-tier municipalities permit ORVs to operate on their roads either by by-law or pursuant to Ontario Regulation (O.Reg.) 316/03 under the *Highway Traffic Act*, which allows ORVs to use township roadways unless specifically prohibited.

## Decision-Making Process

County Council approved the collaborative, six-stage decision-making process illustrated below to guide the ORV By-law review and address the broader use of ORVs on County Roads. The remainder of this summary report documents development of the recommended strategy completed through Stage 5 of the process.







#### Legend

- Existing ATV Network (County of Peterborough)
- - - Provincial Hwy ORV Network

- County of Peterborough Boundary
- Municipal Boundary
- First Nation Reserve
- Provincial Park
- Ganaraska Forest



**FIGURE ES.1**

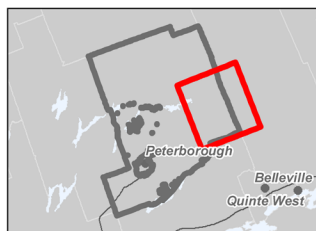
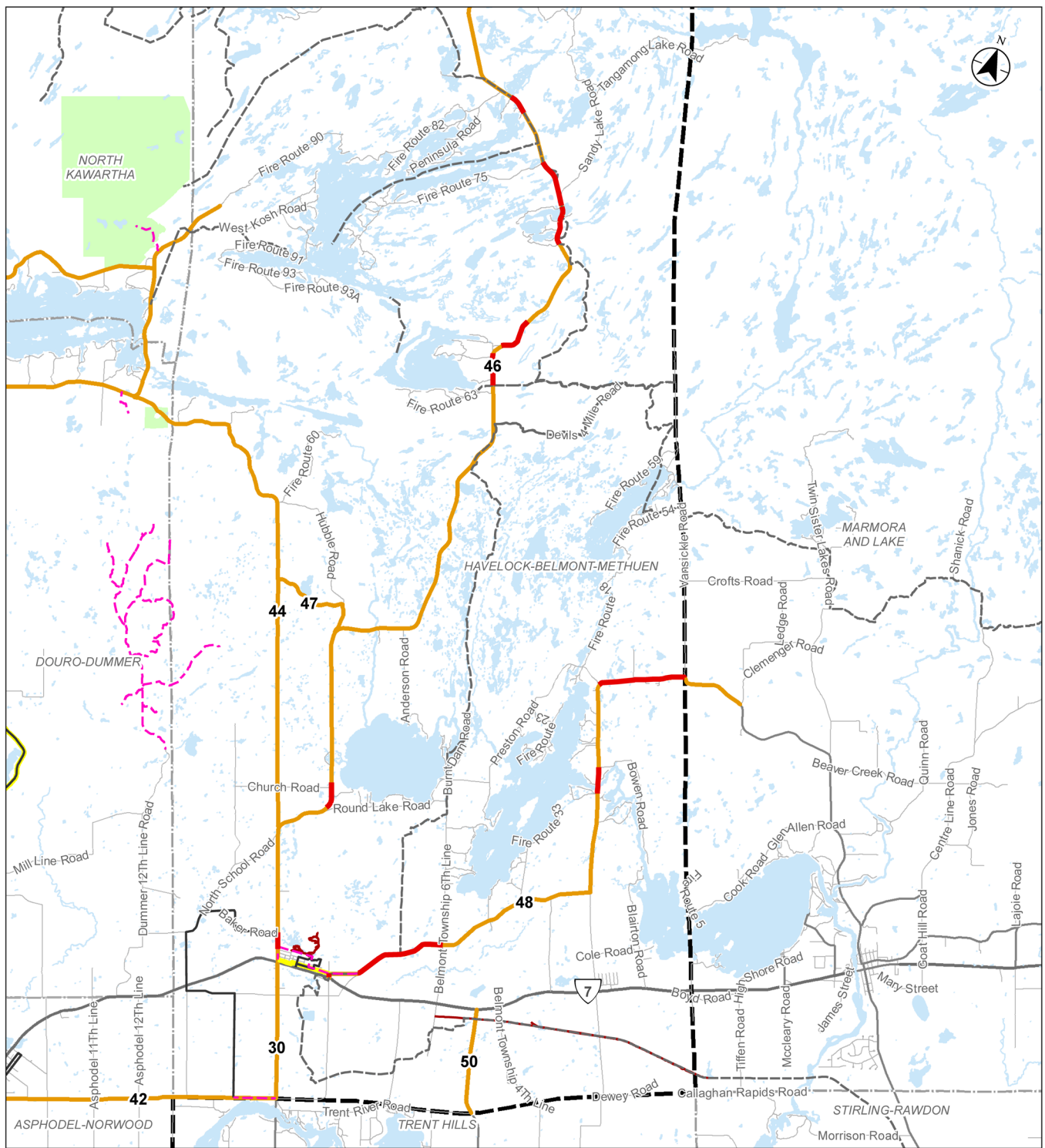
## Existing Off-Road Vehicle Trails in Peterborough County

#### Notes

1. Coordinate System: NAD 1983 CSRS UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources Queen's Printer for Ontario, 2019.

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0 5 10  
Kilometers  
1:500,000 (at original document size of 8.5x11)



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#### Legend

- ORV Permitted On County Road (Schedule A)
- County Road
- County of Peterborough Boundary
- Municipal Boundary
- Provincial Park
- County of Peterborough Public Health Input - Potential Conflict

#### Existing Active Transportation Routes

- ATV Route
- Dirt/ Gravel
- Paved
- - - Snowmobile Route

0 2 4  
 Kilometers  
 1:175,000 (at original document size of 8.5x11)



**FIGURE ES.2**

**Peterborough County Road Sections Currently Permitted for Off-Road Vehicle Use**



## Alternative Strategies

### Description

The County has three options for addressing the use of ORVs on County Roads:

- **Alternative 1 – Allow ORV use on all County Roads.** With this option, the County would amend Schedule A of the ORV By-law to identify all County Roads as permissible for ORV use.
- **Alternative 2 – Allow ORV use on some County Roads.** With this option, the County would augment Schedule A of the ORV By-law with additional County Road segments to develop a coordinated ORV network.
- **Alternative 3 – Prohibit ORV use on all County Roads.** With this option, the County would repeal or replace the ORV By-law with a new regulation prohibiting ORV use on all County Roads.

Alternatives 1 and 3 represent somewhat straightforward “all” or “nothing” scenarios. Alternative 2, the intermediate approach of designating some but not all County Road sections for ORV use, covers a wider range of possibilities. This affords the County some latitude to tailor the solution to the needs of individual lower-tier municipalities while still establishing an effective network of routes connecting ORV riders to key points of interest. The objective in developing this network is to avoid interrupted links that require riders to dismount and trailer to their ultimate destination. Coordination with the lower-tier jurisdictions is essential to ensuring this continuous passage.

Two surveys conducted as part of the community engagement program in Stage 1 of the decision-making process helped identify potential ORV routes. The first survey identified locations of concern with ORV operation (i.e., noise and pollution, speeding, general safety issues, and underage drivers) and value for ORV users (i.e., priority transportation and recreation routes, and tourist attractions). In the second survey, participants provided further comments on issues and locations, and identified existing or desirable routes for ORV use. This input provided a basis for developing an ORV route network to meet user needs while considering the concerns of other stakeholders.

### Assessment

**Table ES.1** summarizes the assessment completed to determine the preferred approach. The assessment compared direct and indirect benefits and costs associated with ORV use on County Roads to identify the alternative offering the greatest benefit at the least cost.

**TABLE ES.1: COMPARATIVE ASSESSMENT OF ALTERNATIVE APPROACHES FOR ADDRESSING OFF-ROAD VEHICLE USE ON COUNTY ROADS**

Criteria	Alternative 1 Allow ORV Use on All County Roads	Alternative 2 Allow ORV Use on Select County Roads	Alternative 3 Prohibit ORV Use on All County Roads
<b>Benefits</b>			
Improves transportation affordability	●	●	○
Encourages tourism	●	●	○
Improves access to community amenities	●	●	○
Improves recreational access and physiological health	●	●	○
Supports agricultural uses	●	●	○
Supports public health and safety	◐	◐	◐
Respects sensitive land uses	○	●	●
<b>Benefits Ranking</b>	<b>2</b>	<b>1</b>	<b>3</b>
<b>Costs</b>			
Requires by-law enforcement	●	●	●
Requires roadway upgrades	○	◐	●
Requires additional roadway maintenance	○	◐	●
Requires new wayfinding/ signage	◐	○	◐
<b>Costs Ranking</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>Summary</b>			
<b>Overall Ranking</b>	<b>2</b>	<b>1</b>	<b>3</b>



Less Preferred → More Preferred



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Alternatives 1 and 2 offer benefits in terms of transportation affordability (by providing a lower cost travel option), tourism, access to community amenities and recreation, physiological health (due to more physical activity), and support for agricultural uses, with Alternative 1 slightly edging out Alternative 2 in certain categories due to the broader ORV network coverage. By contrast, Alternative 3, which is effectively the “do nothing” scenario, would not materially improve any of these criteria.

For public health and safety (risk of injury or property damage) and protection of sensitive land uses, Alternative 1 received the lowest score as certain County Roads traverse potentially sensitive land uses and/or pose safety concerns for ORV use. Alternatives 2 and 3 scored more favourably than Alternative 1, provided ORV use is limited to County Roads without safety concerns and/or outside sensitive natural areas with Alternative 2.

Defining exact costs is difficult at this point. All alternatives present enforcement costs, with Alternative 1 likely posing slightly lower costs than the other two options. Enforcement would be limited to administering *Highway Traffic Act* and County ORV By-law infractions associated with ORV use on municipal roadways for Alternative 1, whereas Alternatives 2 and 3 would likely generate additional service calls to address ORVs travelling on roads not permitted for use.

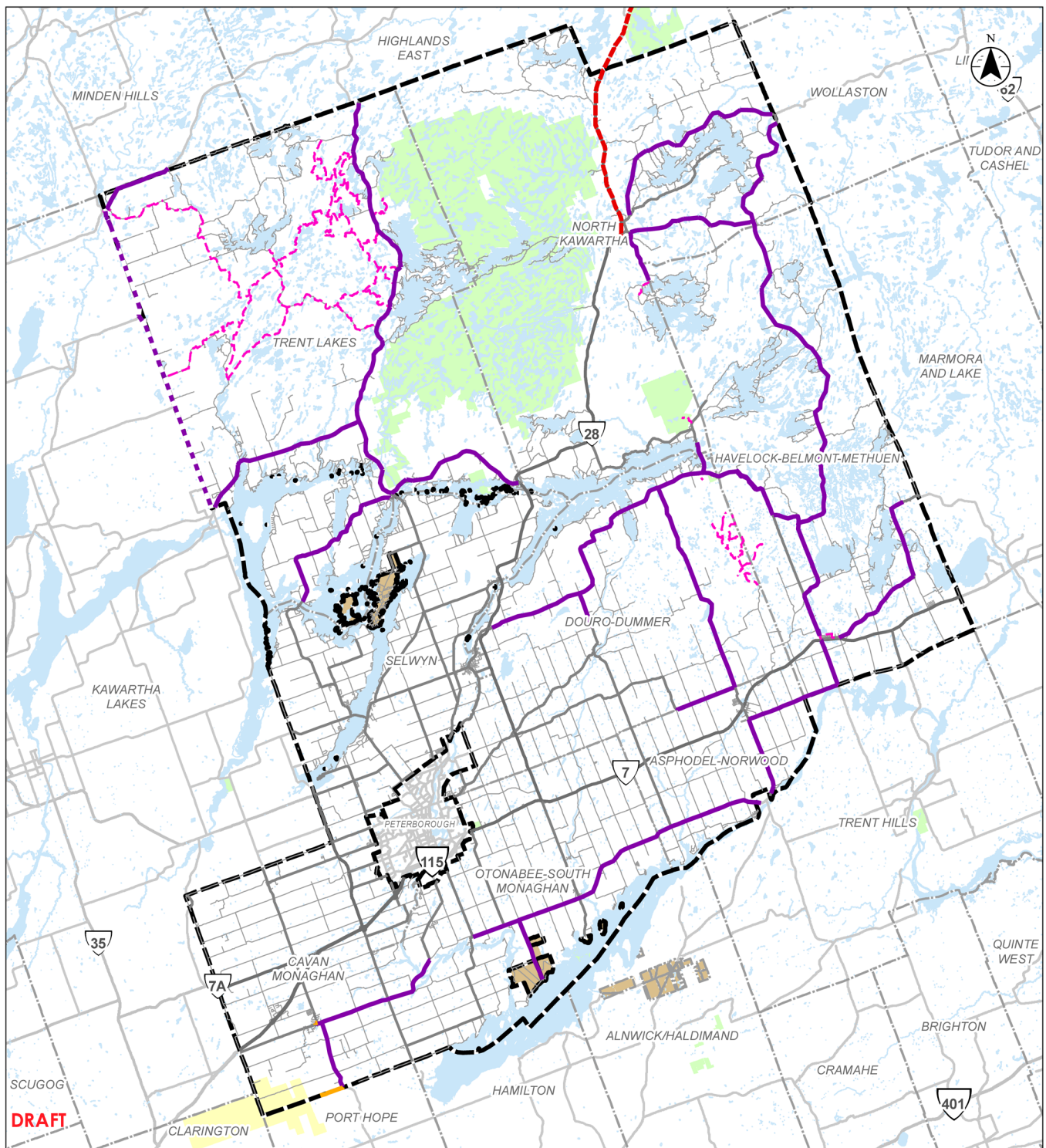
Restricting ORV use on all (Alternative 3) or some (Alternative 2) County Roads results in lower costs for roadway upgrades, maintenance, and wayfinding/signage than options allowing ORV use on all (Alternative 1) or some (Alternative 2) roadways. While the presence of a shoulder was one of the qualitative factors considered in identifying the ORV network concept for Alternative 2, some sections of road likely require shoulder improvement to facilitate more regular ORV use.

**After considering the information gathered through this review, Alternative 2 is recommended for further consideration by the County.**

## Potential Off-Road Vehicle Network

Moving forward with Alternative 2 involves identification of specific County Road segments for ORV use. At present, Schedule A of By-law No. 2016-35 identifies 11 road sections in the Township of Havelock-Belmont-Methuen designated for this purpose. Augmenting this list with other suitable routes would aid in developing a coordinated ORV network in Peterborough County consistent with the intent of Alternative 2.

Building on the preliminary technical analyses and consultation feedback received, the study team developed a potential ORV network for Alternative 2 to better understand the potential impacts of moving forward with this option. **Figure ES.3** illustrates the network concept presented to participants and stakeholders in Stage 4 of the decision-making process for feedback. Throughout the consultation phase, the study team clearly articulated the plan was presented solely for illustrative purposes and likely required further refinement.



#### Legend

- Proposed ORV Network - Further Review/Permissions Required
- Proposed ORV Network - County Roads
- Potential ORV Network - Township Roads
- Existing ATV Network (County of Peterborough)
- Provincial Hwy ORV Network
- County of Peterborough Boundary
- Municipal Boundary
- First Nation Reserve
- Provincial Park
- Ganaraska Forest



**FIGURE ES.3**

### Potential County Road Off-Road Vehicle Network

#### Notes

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It became evident from the feedback received in Stage 4 that the potential ORV network concept required further consideration and refinement, as anticipated. While the network reflects input received through earlier stages of the review, its configuration posed concern for some stakeholders. For example, route continuity in some areas of the County relies on roads under lower-tier municipal jurisdiction, which the County has no authority over. In other locations, the potential route follows a County Road deemed acceptable for ORV use from a technical perspective but considered unsuitable by certain stakeholders.

The level of support for allowing ORVs to operate on County Roads, in general, also differs by municipality. Some lower-tier and adjoining municipalities expressed concern about the potential impact to their communities, given the inevitable need to follow suit and permit ORVs to operate on roads under their jurisdiction. By contrast, other townships requested the County to designate all County Roads in their municipality for ORV use to complement local by-laws. This inconsistency suggested the need for a more nuanced, collaborative approach to identifying the specific County Roads for ORV use in each lower-tier municipality, with further involvement of the jurisdiction in determining the routes designated within their community.

Given the concerns expressed, further consultation with the lower-tier and adjoining municipalities, First Nations, and key stakeholders, like police services, is recommended before designating the ORV network and specifying additional County Road sections for ORV use in Schedule A of the by-law. Conferring specifically with the townships enables the County to coordinate potential routes and ensure compatibility with local objectives, which may differ by jurisdiction. This “customized” approach is consistent with the current ORV By-law, which designates select County Road segments in the Township of Havelock-Belmont-Methuen for ORV use but not in other lower-tier municipalities. It affords the townships greater input into and influence over the ORV operating environments within their communities and would, ideally, render a county-wide ORV network comprising both County and local municipal roads.

The process for defining the preferred ORV network entails the following steps, consistent with the approach applied in developing the potential ORV network concept shown in **Figure ES.3**:

- Conduct **quantitative road segment assessment** using geospatial (GIS) and traffic data to confirm the County Road segments suitable for ORV use.
- Undertake **qualitative network-wide assessment** using GIS data, site inspection, and other information to account for factors not well captured in the quantitative analysis, either due to limitations in available data or because it was more appropriate to consider the criterion on a broader, network-wide level.
- Perform **network refinement** based on feedback from County and lower-tier municipal staff and other parties identified above.

## Quantitative Road Segment Assessment

Adopting Alternative 2 infers the County would consider allowing ORVs to operate on any County Road under the “right” circumstances. By defining these circumstances, road segments

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deemed unsuitable for ORV use can be excluded from further consideration. With these roadways screened out, the focus becomes identifying a network of routes that best serves the mutual interests of the County and its lower-tier municipalities.

The process of determining the suitability of specific County Road segments for ORV use began with a technical assessment based on a series of quantitative factors. Consistent with the approach applied in developing the potential ORV network concept shown in **Figure ES.3**, the criteria focus on quantifiable factors known to impact the safety of ORV operation on public roads.

**Table ES.2** lists the quantitative assessment criteria applied in identifying the County Road segments deemed suitable for ORV use. The technical criteria were weighted to reflect their relative influence on the safety of ORV operation on public roads, with the rationale described in the table. The data source is also noted.

**TABLE ES.2: QUANTITATIVE ASSESSMENT CRITERIA**

Criteria	Weighting	Justification of Weighting	Source
Traffic Volumes	35%	Highly correlated to collision potential for ORVs.	Traffic count data
Speeding (Based on 85 <sup>th</sup> ile observed vehicle speed)	30%	Highly correlated to collision potential for ORVs.	Traffic count data
Posted Speed Limit	15%	Desire for ORVs to use lower-speed roadways. Highly correlated to collision severity for ORVs.	GIS data (roadways)
Truck Utilization	10%	Desire to separate ORVs from truck traffic. Highly correlated to collision severity for ORVs.	Traffic count data
Road Surface	5%	ORVs can travel on most surfaces, but road surface is generally correlated to size/quality of shoulder.	GIS data (roadways)
History of ORV Collisions	5%	Too few ORV collisions have occurred to infer the overall safety of the individual roadways for ORV use.	Collision data

The quantitative assessment process involved scoring each County Road segment based on the criteria listed in **Table ES.2** using geospatial (GIS) and traffic data provided by the County. Road segments scoring less than 50% were generally eliminated from further consideration for ORV use.



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**Figure ES.4** shows the quantitative assessment scores, depicting the County Road segments scoring higher and lower than the 50% threshold. Certain segments with scores below 50% may still be considered for ORV use if satisfying other objectives like route continuity. For example, short sections of County Road 46 received scores lower than 50%. But since the remainder of the roadway met the 50% threshold, the potential ORV network concept in **Figure ES.3** included the entire road to provide a north-south connection between two established trail systems.

### Qualitative Network-Wide Assessment and Network Refinement

The review of specific County Road segments for ORV use also involves a qualitative assessment, with the aim of establishing proper connections between network segments. **Table ES.3** lists the factors to be assessed, with the rationale for their use and data source noted in the table. Feedback received from the public, stakeholders, First Nations, and lower-tier municipal staff in Stages 1 and 4 of the decision-making process aided in defining the factors.

**TABLE ES.3: QUALITATIVE ASSESSMENT FACTORS**

Criteria	Comment	Source
Connectivity to Existing ORV Network	Access to other segments of the ORV network from the roadway	GIS data
Connectivity to Trails/Nature	Access to ORV trails, hiking trails, and parks	GIS data
Connectivity to Population Centres	Access to (but not through) settlements and communities	GIS data
Avoidance of Noise-Sensitive Land Uses	Limiting ORV use through conservation areas or settlements	GIS data (land use)
Driver's Road Violation Expectation	Roads where automobile drivers might anticipate encountering other slow-moving vehicles along the roadways, such as tractors	GIS data (land use)
Avoidance of Sidewalks/Multi-Use Paths	Limiting ORV use on roads with high pedestrian/cyclist activity	Virtual inspection using Street View
Presence of Suitable Road Shoulders	Wide road shoulder to support safe ORV use	Virtual inspection using Street View

The qualitative assessment process entails reviewing the County Road segments carried forward from the quantitative analysis based on the factors listed in **Table ES.3** using geospatial (GIS) data, site inspection, and other information.





The first phase of the assessment, which involves comparisons to GIS databases and mapping, provides a better understanding of network connectivity and areas of possible concern. For the potential ORV network concept in **Figure ES.3**, select County Road segments in low traffic agricultural/rural areas were added to improve connectivity.

The second phase, which comprises visual inspection of the subject County Road segments, allows for checks of road shoulders, sidewalks, and multi-use paths in areas suspected to be of concern (e.g., a roadway approaching a settlement area or a roadway that overlapped with the County's Active Transportation Network). Carrying out a desktop review of these elements using Google Street View and GIS data provides useful insight and can be efficient. However, a site inspection should be conducted to confirm present day conditions in case of discrepancies with the online, digital images.

### **Network Refinement**

Final network refinements may be required following the qualitative assessment to ensure the preferred ORV routes serve the intended purpose. Typically, refinement focuses on adding or removing road segments from the network to address site specific considerations. Stakeholders involved in identifying the network through the qualitative assessment may have input into the refinement process and should be consulted, as appropriate.

## **Complementary Actions**

The following list of complementary actions can help improve the regulation, guidance, management, understanding, and ultimately safety of ORV operation on County Roads.

### **Update County Off-Road Vehicle By-law**

The County enacted the current ORV By-law in 2016. Comparing the by-law to regulations in effect in neighbouring municipalities suggests the relevant provisions of the County's by-law remain relatively consistent with contemporary practice. Like other by-laws for predominately rural municipalities, the County's ORV By-law focuses on nuisance and safety factors with provisions to:

- Restrict ORV operation to specified sections of County Road;
- Set ORV speed limits to 20 km/h in 50 km/h zones and 50 km/h in zones allowing 50 km/h or more;
- Prohibit ORV operation between 9:00 PM and 8:00 AM; and
- Prohibit ORV operation at decibel levels above the manufacturer's recommendation.

The current by-law includes a specific clause mandating its review in May 2018, which has been deferred to this study. On this basis alone, the by-law needs to be updated to change this provision. Revisions will also be needed to incorporate recent revisions to the statute law,

specifically the changes to O.Reg. 316/03 that expanded the list of vehicles considered to be ORVs.

The County may wish to consider additional restrictions on operation in more urbanized locations if County Roads within the built-up areas become locations for ORV use. Any revisions to the by-law should respond to the most common objections to ORV use expressed during the consultation process, recognizing any further restrictions might impact the economic benefits communities could realize from more ORV traffic. If localized restrictions of this type are contemplated, a focused consultation should be undertaken to determine the priorities of each community and establish support for the preferred approach.

### **Conduct Detailed Road Condition Assessment**

A more detailed review of current road conditions should be completed prior to incorporating additional County Road segments into the ORV By-law, consistent with previous guidance provided by the County's insurer. This additional assessment is needed to supplement the desktop review completed for the potential ORV network concept and should assess/update:

- Widths of the pavement and shoulder, if any;
- Condition of the pavement and shoulder;
- All accessible and unprotected fixed object hazards (e.g., guiderail end, bridge abutment, tree, parked vehicles, etc.);
- All accessible and unprotected moving object hazards (e.g., pedestrians, bicycles, railroad trains, trucks, buses, animals, etc.);
- All other potential hazards that may be located on or beside the road;
- Whether signing and pavement markings are appropriate for all hazards found; and
- Anything on the road a driver (especially a new one) might find surprising, confusing, or requiring complex manoeuvres.

### **Develop and Launch Public Education and Communication Program**

Most people recognize ORVs as a form of travel for use off-road and on recreational trails for recreational and leisure purposes. But not all acknowledge ORVs as a viable form of on-road transportation to support the movement of people, goods, and services.

An education and communication program, developed in consultation with the lower-tier municipalities and other interested parties, could serve two purposes:

- Inform ORV users on how to safely operate their vehicles on County Roads; and
- Remind other drivers how to safely interact with ORVs.

A program would also help the County mitigate certain risks.

Using a variety of tools to help ensure that messaging is conveyed to a broad demographic, the program should clearly communicate:

- The County Roads permitted for ORV use;
- Local points of interest (i.e., off-road trail networks, participating community businesses and amenities within and beyond the County, other suitable destinations);
- Local ORV organizations and associated member benefits;
- ORV use and road safety, particularly for roadways with high volumes of traffic travelling at higher speeds;
- The significance of protected natural areas to help foster a culture of respect and awareness and minimize damage to resources;
- Need for respect of the “rules of the road” and responsible operator behaviour on and off the road;
- Relevant provincial legislation and associated penalties for infractions; and
- Restrictions, as set forth in the County’s by-law, including timing windows, permitted speeds, etc.

Potential program actions include:

- Informing the public (via newspaper/radio/social medial website) that ORVs are allowed/not allowed on County Roads;
- Specifying the roads and the months of operation, as well as the hours of operation, on County Roads in all communications; and
- Posting signage as drivers approach the designated roads, such as “You are now entering an area where ORVs are allowed to operate please share the road.”

The merit of establishing a Neighbourhood Ambassador Program comprising representatives from ORV organizations residing and/or working in participating communities and/or adjacent to designated roadways should also be considered. These individuals could assist the County in the monitoring, education, and communication of ORV provisions by:

- Helping to monitor the permitted roadways periodically and alerting authorities when a violation is observed;
- Enhancing the education and communication program by serving as role models and educating on-road ORV riders about safety, the importance of protecting the environment, and staying on designated roads as per the County’s ORV By-law requirements;
- Assisting riders if they are unclear about the designated network and associated restrictions, and directing them to permitted roadways; and
- Responding to questions from other riders and/or community members.

## **Consider Establishing Off-Road Vehicle Advisory Committee**

Forming a committee of community members representing a broad range of expertise and interests (e.g., ORV users, transportation (including active transportation), enforcement, and economic development, etc.), County staff, and Council, as well as residents, could help build consensus and ensure the success of the recommended strategy. Typically established as an advisory committee of Council, the ORV committee could offer a forum for communication and conflict resolution between different types of users. The group could also guide the County through the next steps in the decision-making process and help address issues and challenges that arise. The committee would be specifically helpful in:

- Offering advice with respect to policy development;
- Continuing the path towards ORV road network planning;
- Identifying road improvement and maintenance needs; and
- Guiding the education and communication program.

## **Potential Financial Impacts**

The recommended strategy poses some potential financial implications for the County and its lower-tier municipalities. Although difficult to quantify currently in the absence of a preferred ORV network, likely costs include the following:

### **Enforcement**

The number of calls for police service could increase with Alternative 2. Allowing ORVs to operate on some County Roads but not others, as contemplated with this scenario, could escalate the requests for enforcement in situations where riders disobey the by-law provisions and/or operate vehicles on County Road segments not intended for ORV use.

No alternative likely eliminates policing costs entirely, even the scenario prohibiting ORV use on all County Roads. In this case, police may still receive calls for service to enforce the by-law on ORV riders operating their vehicles on County Roads, as opposed to users disobeying specific by-law provisions like speed limits and hours of operation.

The lower-tier municipalities would bear the costs for any increase in police enforcement, as the jurisdictions responsible for providing this service in Peterborough County. That said, their policing contracts do not explicitly recognize enforcement of ORV by-laws on County and/or local municipal roads as a separate or enhanced level of service. Other items, like hours of service and/or number of officers, typically form the basis of their service standards and, ultimately, the financial terms of the policing agreements. As such, the lower-tier municipalities would not experience an immediate financial impact but could encounter higher costs or lower levels of service for other types of calls in future years if enforcement demands grow due to allowing ORV use on select County Roads.



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The Township of Havelock-Belmont-Methuen policing contract with the OPP provides for a blended hourly rate of approximately \$80.00 to \$100.00 for a constable, factoring in wages, benefits, and vehicle costs. Assuming this rate range is typical across the County, **Table ES.4** provides order of magnitude estimates of the total additional policing cost to enforce the ORV by-law for Alternative 2 for different scenarios, if additional service is required. This cost would ultimately be allocated between the eight lower-tier municipalities, but the distribution is unknown at present and will depend, to some degree, on the extent of the preferred ORV network within each jurisdiction.

**TABLE ES.4: COSTS FOR ADDITIONAL POLICE SERVICE SCENARIOS**

Hours of Additional Service Daily	Additional Constables			
	1		2	
	\$80/hour	\$100/hour	\$80/hour	\$100/hour
2	\$58,400	\$73,000	\$116,800	\$146,000
4	\$116,800	\$146,000	\$233,600	\$292,000
6	\$175,200	\$219,000	\$350,400	\$438,000
8	\$233,600	\$292,000	\$467,200	\$584,000

The calculations in the table assume:

- Police enforce the by-law provisions every day of the year (365 days). Seasonal or time of year enforcement scenarios would reduce costs.
- Up to two additional constables would provide the enhanced level of service for ORV by-law enforcement. This scenario reflects one officer from each service (OPP and PPS) or multiple officers from the same service (likely OPP given the area covered). It also assumes OPP resources can be shared across municipalities, consistent with the policing contracts in place. Further, the analysis assumes two additional constables could effectively enforce the by-law provisions. Extra officers would cost more.
- Different levels of additional effort, from as little as two hours per day up to eight hours daily.
- Specialized vehicles (like ORVs) and equipment would be an additional cost over and above the values included in the table.

Based on these myriad assumptions, additional enforcement, if needed, could cost the lower-tier municipalities, collectively, between about \$60,000 and \$600,000 annually for the scenarios examined.

## Roadway Improvements and Maintenance

From the County's perspective, additional costs for improvements to and maintenance of the County Road segments forming the preferred ORV network would pose the most significant

financial impact. The magnitude of one-time and on-going costs will depend on the extent of the preferred ORV network and the state and condition of the County Road segments forming the routes. **Table ES.5** summarizes the types of infrastructure improvements and maintenance potentially required.

**TABLE ES.5: POTENTIAL ROADWAY IMPROVEMENT AND MAINTENANCE REQUIREMENTS TO PERMIT OFF-ROAD VEHICLE USE**

Item	One-Time Improvement	On-going Maintenance
Shoulders	<ul style="list-style-type: none"> <li>Grading of existing shoulders to improve state</li> <li>Construction of new shoulders</li> </ul>	<ul style="list-style-type: none"> <li>Grading</li> <li>Mowing</li> </ul>
Clear Zones	<ul style="list-style-type: none"> <li>Construction to remove, relocate, and/or protect objects (typically roadside)</li> </ul>	<ul style="list-style-type: none"> <li>Grading</li> <li>Mowing</li> </ul>
Traffic Signs	<ul style="list-style-type: none"> <li>Installation of regulatory and warning signs</li> </ul>	<ul style="list-style-type: none"> <li>Repair, maintenance, replacement of signs</li> </ul>
Pavement Markings	<ul style="list-style-type: none"> <li>Placement of white edge line markings</li> </ul>	<ul style="list-style-type: none"> <li>Pavement marking refresh</li> </ul>

It is difficult to quantify the total additional roadway improvement and maintenance costs associated with modifying the County's ORV By-law for Alternative 2 prior to confirming the preferred ORV network. Costs will be estimated through subsequent phases of work. In some cases, though, it may be possible to phase the costs for identified improvements over time as capital budgets permit.

## Insurance

The financial analysis has assumed the County's insurance premiums would not increase if ORVs are allowed to operate on more County Roads per Alternative 2, based on previous guidance. Continued and further measures the County can take to help mitigate risk include:

- Posting speed limits for ORVs;
- Establishing inspection and maintenance requirements;
- Updating existing road policies, procedures, and documentation;
- Properly maintaining gravel shoulders and drop-offs for common law duty of care purposes;
- Reviewing the sufficiency of shoulders used to permit the operation of ORVs; and
- If ORVs must operate on the travelled portion of the roadway, ensuring stopping sight distance constraints on the roadway (i.e., horizontal and vertical alignment) would not

cause a motorist overtaking an ORV to take evasive action to avoid a collision with the slower moving vehicle.

The detailed road condition assessment noted above will provide some of this information.

### Complementary Actions

**Table ES.6** provides high-level cost estimates for the complementary actions associated with modifying the County's ORV By-law for Alternative 2. These costs could apply for some or all the other alternatives.

**TABLE ES.6: COSTS FOR COMPLEMENTARY ACTIONS**

Item	Estimated Cost	Comments
County Off-Road Vehicle By-law Update	n/a	County staff to complete
Detailed Road Condition Assessment	\$0 - \$30,000 initial \$0 - \$5,000 annually	Initial cost to collect information to complete the review by County staff (\$0) or with the assistance of a consultant (\$30,000). Annual operating cost to keep the data current.
Public Education and Communication Program	\$50,000 - \$100,000 initial \$10,000 - \$25,000 annually	Initial cost to develop and launch program with assistance of consultant. Annual operating cost to deliver program.
Off-Road Vehicle Advisory Committee	\$1,000 annually	Nominal annual cost to operate committee

### Staff Resources

Outside the items listed in **Table ES.5** and **Table ES.6**, the additional cost for staff resources to administer the County's ORV By-law for Alternative 2 is likely modest, although limited availability exists today due to other, existing competing priorities.

## Recommendations

Based on work completed to date, Peterborough County should:

1. Adopt **Alternative 2 – Allow ORV Use on Select County Roads** as the preferred approach for addressing ORV use on County Roads.
2. Collaborate with the lower-tier municipalities to identify either:
  - a) A county-wide ORV network plan, preferably, or
  - b) A coordinated County and local municipal road ORV network plan for each jurisdiction, or
  - c) A County Road ORV network.
3. Adopt and apply the qualitative assessment factors set out in **Table ES.3** in identifying and confirming the County Roads and lower-tier municipal roads, where applicable, permitted for ORV use.
4. Not permit ORV use on County Roads shown in **Figure ES.4** with scores lower than 50% unless justified through the qualitative assessment process.
5. Conduct a detailed road condition assessment to confirm the suitability of the identified County Road segments for ORV use and identify potentially needed roadway improvements.
6. Consult with the following parties in confirming the preferred ORV network:
  - a) Lower-tier municipal staff and Council,
  - b) Adjacent lower and upper-tier municipalities,
  - c) Curve Lake and Hiawatha First Nations, and
  - d) Ganaraska Region Conservation Authority and Otonabee Conservation.
7. Update the County Off-Road Vehicle By-law to incorporate the preferred ORV network and reflect recent revisions in the statute law and pertinent comments heard through the consultation process.
8. Develop and launch a public education and communication program following enactment of the by-law revisions, with some components considered for implementation prior.
9. Consider establishing an Off-Road Vehicle Advisory Committee.