### MUNICIPALITY OF THE COUNTY OF KINGS SPECIAL MUNICIPAL COUNCIL October 15, 2019 Following Committee of the Whole AGENDA

Audio Recording Times Noted in Red (Minutes:Seconds)

1. Roll Call 00:00

2.	Approv	Approval of Agenda 01:13							
3.	Disclosure of Conflict of Interest Issues								
4.	Engineering and Public Works, Lands and Parks Services								
	a.	Priority List for Provincial/Village Subdivision Road Resurfacing - Supplemental Report 01:52	Page 2						
5.	Recom	mendations from Committee of the Whole October 15, 2019							
	a.	Priority List for Speed Display Devices (FY 2019-20) 28:38							
	b.	Community Grants Policy: Amendments (seven days' notice) 29:43							
	C.	Community Hall Assistance Program: Repeal (seven days' notice) 34:02							

7. Adjournment 34:40

6. Comments from the Public None



то	Special Municipal Council
PREPARED BY	Scott Quinn, P. Eng., Director of Engineering & Public Works, Lands and Parks
MEETING DATE	October 15, 2019
SUBJECT	Supplemental Report Priority List for Provincial/Village Subdivision Road Resurfacing

### <u>ORIGIN</u>

- September 5, 2017 Council approved entering into Cost Sharing Agreement 2018-014 Provincial J-Class Road Resurfacing ("Agreement") with Department of Transportation and Infrastructure Renewal ("DTIR").
- October 2, 2018 Municipal Council adopted the revised Policy: <u>EPW-04-012 Village/Subdivision</u> <u>Road Paving Priority List</u>.
- October 3, 2019 Municipal Council tabled the Staff report on the proposed FY2020-21 Priority List.

### RECOMMENDATION

That Municipal Council approve the Priority List, as attached to the October 1, 2019 Special Council agenda, to be submitted under Cost Sharing Agreement 2018-014 - Provincial J-Class Road Resurfacing for 2020.

That Municipal Council instruct staff, commencing in 2021, to seek annual input from the Villages on the kilometers of J-Class roads prior to submission to the Nova Scotia Department of Transportation and Infrastructure Renewal.

That Municipal Council instruct staff to provide a detailed presentation of the Municipality's proposed asset management plan for J-Class roads for financing considerations of the Villages.

### **INTENT**

To gain Council approval of the list of roads to be recommended to the Nova Scotia Department of Transportation and Infrastructure Renewal (NSTIR) for resurfacing in 2020 as per the Agreement between the Province and Municipality, and provide relevant background materials related to the J-Class capital road program and asset management proposal.

### DISCUSSION

### **Background**

J-Class Roads are owned by the Province of Nova Scotia.

In total there are ~1,650 km of Provincial J-Class roads (~903km are located in regional municipalities while ~745 are located within the rural municipalities). Kings is by far the largest of the rural category (135.2 km).

As part of the 1995 *Provincial – Municipal Service Exchange*, rural municipalities began cost-sharing in the maintenance of J-Class roads. For example, in the current fiscal year the Municipality of the County of Kings (Kings) has budgeted to pay the Province \$733,000, towards J-Class Road maintenance. Shortly after the commencement of the mid-1990s service exchange, the Province recognized that the poor



### Municipality of the County of Kings Request for Decision

condition of their roads was leading to higher maintenance costs. As a result of this recognition, they implemented a J-Class Road capital program.

Municipalities contribute 50% of annual capital upgrades that are approved by NSTIR. The Provincial budget for cost-sharing with all municipalities totals \$2M per year (matched with municipal funds produces an annual \$4M program). The J-Class capital program dictates that municipalities submit a priority listing of roads and that in any one year NSTIR will not approve more than 10 roads in any one municipality.

The following details the distribution of the provincial kilometers within the rural municipalities.

### Table 1: Breakdown of the Provincial Kilometers located in Rural Jurisdictions

ral Municipalities inicipality of the County of Kings inicipality of the County of Colchester inicipality of the District of Lunenburg inicipality of the District of East Hants inicipality of the District of Chester inicipality of the District of Chester inicipality of the District of West Hants inicipality of the County of Pictou inicipality of the County of Richmond inicipality of the County of Inverness inicipality of the County of Annapolis inicipality of the District of Argyle inicipality of the District of Barrington inicipality of the District of Guysborough inicipality of the District of Guysborough inicipality of the District of Yarmouth inicipality of the District of Shelburne	135.2      106.2      79.1      64.3      41.6      36      33.7      30.3      29.9      28.9      28.4      24.6      23.8      16.8      15.1      15      14.7      10.4      6.2	18.1%        14.3%        10.6%        8.6%        5.6%        4.8%        4.5%        4.1%        3.9%        3.8%        3.2%        2.3%        2.0%        2.0%        1.4%
Inicipality of the County of Colchester Inicipality of the District of Lunenburg Inicipality of the District of East Hants Inicipality of the District of Chester Inicipality of the District of Chester Inicipality of the District of West Hants Inicipality of the County of Pictou Inicipality of the County of Pictou Inicipality of the County of Richmond Inicipality of the County of Inverness Inicipality of the County of Annapolis Inicipality of the District of Argyle Inicipality of the District of Barrington Inicipality of the District of Guysborough Inicipality of the District of Yarmouth Inicipality of the District of Yarmouth Inicipality of the District of Digby Inicipality of the District of Shelburne	79.1      64.3      41.6      36      33.7      30.3      29.9      28.9      28.4      24.6      23.8      16.8      15.1      15      14.7      10.4	$\begin{array}{c} 10.6\% \\ 8.6\% \\ 5.6\% \\ 4.8\% \\ 4.5\% \\ 4.1\% \\ 4.0\% \\ 3.9\% \\ 3.8\% \\ 3.3\% \\ 3.2\% \\ 2.3\% \\ 2.0\% \\ 2.0\% \\ 2.0\% \\ 1.4\% \end{array}$
inicipality of the District of Lunenburg inicipality of the District of East Hants inicipality of the District of Chester inicipality of the District of Chester inicipality of the District of West Hants inicipality of the County of Pictou inicipality of the County of Richmond inicipality of the County of Inverness inicipality of the County of Annapolis inicipality of the County of Annapolis inicipality of the District of Argyle inicipality of the District of Barrington inicipality of the District of Guysborough inicipality of the District of Yarmouth inicipality of the District of Digby inicipality of the District of Shelburne	64.3      41.6      36      33.7      30.3      29.9      28.9      28.4      24.6      23.8      16.8      15.1      15      14.7      10.4	$\begin{array}{c} 8.6\% \\ 5.6\% \\ 4.8\% \\ 4.5\% \\ 4.1\% \\ 4.0\% \\ 3.9\% \\ 3.8\% \\ 3.3\% \\ 3.2\% \\ 2.3\% \\ 2.0\% \\ 2.0\% \\ 2.0\% \\ 1.4\% \end{array}$
inicipality of the County of Cumberland inicipality of the District of Chester inicipality of the District of West Hants inicipality of the County of Pictou inicipality of the County of Richmond inicipality of the County of Inverness inicipality of the County of Annapolis inicipality of the County of Annapolis inicipality of the District of Argyle inicipality of the District of Barrington inicipality of the District of Guysborough inicipality of the District of Yarmouth inicipality of the District of Digby inicipality of the District of Shelburne	41.6 36 33.7 30.3 29.9 28.9 28.4 24.6 23.8 16.8 15.1 15 14.7 10.4	5.6% 4.8% 4.5% 4.1% 4.0% 3.9% 3.8% 3.8% 3.3% 3.2% 2.3% 2.0% 2.0% 2.0% 1.4%
inicipality of the District of Chester inicipality of the District of West Hants inicipality of the County of Pictou inicipality of the County of Richmond inicipality of the County of Inverness inicipality of the County of Annapolis inicipality of the County of Annapolis inicipality of the District of Argyle inicipality of the District of Argyle inicipality of the District of Barrington inicipality of the District of Guysborough inicipality of the District of Yarmouth inicipality of the District of Digby inicipality of the District of Shelburne	36      33.7      30.3      29.9      28.9      28.4      24.6      23.8      16.8      15.1      15      14.7      10.4	4.8% 4.5% 4.1% 4.0% 3.9% 3.8% 3.8% 3.3% 2.3% 2.3% 2.0% 2.0% 2.0% 1.4%
Inicipality of the District of West Hants Inicipality of the County of Pictou Inicipality of the County of Richmond Inicipality of the County of Inverness Inicipality of the County of Annapolis Inicipality of the County of Annapolis Inicipality of Victoria County Inicipality of the District of Argyle Inicipality of the District of Barrington Inicipality of the District of Guysborough Inicipality of the District of Yarmouth Inicipality of the District of Digby Inicipality of the District of Shelburne	33.7      30.3      29.9      28.9      28.4      24.6      23.8      16.8      15.1      15      14.7      10.4	4.5% 4.1% 4.0% 3.9% 3.8% 3.3% 3.2% 2.3% 2.0% 2.0% 2.0% 1.4%
Inicipality of the County of Pictou Inicipality of the County of Richmond Inicipality of the County of Inverness Inicipality of the County of Annapolis Inicipality of the County of Annapolis Inicipality of Victoria County Inicipality of the District of Argyle Inicipality of the District of Barrington Inicipality of the District of Guysborough Inicipality of the District of Guysborough Inicipality of the District of Yarmouth Inicipality of the District of Digby Inicipality of the District of Shelburne	30.3 29.9 28.9 28.4 24.6 23.8 16.8 15.1 15 14.7 10.4	4.1% 4.0% 3.9% 3.8% 3.3% 2.3% 2.3% 2.0% 2.0% 2.0% 1.4%
inicipality of the County of Richmond inicipality of the County of Inverness inicipality of the County of Annapolis inicipality of Victoria County inicipality of the District of Argyle inicipality of the District of Barrington inicipality of the District of Guysborough inicipality of the District of Guysborough inicipality of the District of Yarmouth inicipality of the District of Digby inicipality of the District of Shelburne	29.9 28.9 28.4 24.6 23.8 16.8 15.1 15 14.7 10.4	4.0% 3.9% 3.8% 3.3% 2.3% 2.0% 2.0% 2.0% 2.0% 1.4%
inicipality of the County of Inverness inicipality of the County of Annapolis inicipality of Victoria County inicipality of the District of Argyle inicipality of the District of Barrington inicipality of the District of Guysborough inicipality of the County of Antigonish inicipality of the District of Yarmouth inicipality of the District of Digby inicipality of the District of Shelburne	28.9 28.4 24.6 23.8 16.8 15.1 15 14.7 10.4	3.9% 3.8% 3.3% 2.3% 2.0% 2.0% 2.0% 1.4%
inicipality of the County of Annapolis inicipality of Victoria County inicipality of the District of Argyle inicipality of the District of Barrington inicipality of the District of Guysborough inicipality of the County of Antigonish inicipality of the District of Yarmouth inicipality of the District of Digby inicipality of the District of Shelburne	28.4 24.6 23.8 16.8 15.1 15 14.7 10.4	3.8% 3.3% 2.3% 2.0% 2.0% 2.0% 1.4%
nicipality of Victoria County nicipality of the District of Argyle nicipality of the District of Barrington nicipality of the District of Guysborough nicipality of the County of Antigonish nicipality of the District of Yarmouth nicipality of the District of Digby nicipality of the District of Shelburne	24.6 23.8 16.8 15.1 15 14.7 10.4	3.3% 3.2% 2.3% 2.0% 2.0% 2.0% 1.4%
inicipality of the District of Argyle inicipality of the District of Barrington inicipality of the District of Guysborough inicipality of the County of Antigonish inicipality of the District of Yarmouth inicipality of the District of Digby inicipality of the District of Shelburne	23.8 16.8 15.1 15 14.7 10.4	3.2% 2.3% 2.0% 2.0% 2.0% 1.4%
inicipality of the District of Barrington inicipality of the District of Guysborough inicipality of the County of Antigonish inicipality of the District of Yarmouth inicipality of the District of Digby inicipality of the District of Shelburne	16.8 15.1 15 14.7 10.4	2.3% 2.0% 2.0% 2.0% 1.4%
nicipality of the District of Guysborough inicipality of the County of Antigonish inicipality of the District of Yarmouth inicipality of the District of Digby inicipality of the District of Shelburne	15.1 15 14.7 10.4	2.0% 2.0% 2.0% 1.4%
nicipality of the County of Antigonish inicipality of the District of Yarmouth inicipality of the District of Digby inicipality of the District of Shelburne	15 14.7 10.4	2.0% 2.0% 1.4%
nicipality of the District of Yarmouth nicipality of the District of Digby nicipality of the District of Shelburne	14.7 10.4	2.0% 1.4%
nicipality of the District of Digby nicipality of the District of Shelburne	10.4	1.4%
inicipality of the District of Shelburne		
inicipality of the District of Shelburne	6.0	
	0.2	0.8%
inicipality of the District of St. Mary's	4.9	0.7%
inicipality of the District of Clare	0	0.0%
Rural Sub-total	745.1	100.0%
Average Rural	35.5	
Km Distanco	Number of	% of Rural Sub-Total
		32.4%
	_	19.2%
	_	30.7%
	_	12.8%
	-	3.4%
		3.4% 1.5%
		0.0%
		100.0%
0	2 <b>Km Distance</b> 0 km+ -99 km -49 km -24 km -14 km 0 Km	Km Distance      rurals        0 km+      2        -99 km      2        -49 km      7        -24 km      5        -14 km      2        0 Km      2



### Municipality of the County of Kings Request for Decision

### J-Class Relative to Kings

Kings' priority list has been assembled in accordance with the provincial program criteria. Not surprisingly the limited provincial funding causes an extended (many year) prioritization list extending out as far as 2040. This prioritization process/list proves that the present-day provincial program has significant structural problems and is not acceptable to the Municipality, the Villages, and property owners situate along J-Class Roads.

To address the structural problems of the present-day provincial program, Kings had a third-party subject matter expert evaluate the condition of almost all J-Class Roads in Kings County. The purpose of this review was determine the most cost-effective way to rebuild and maintain J-Class roads. The results of this analysis show that a \$5.6M investment is required today, and an additional \$2.3M in maintenance expenditures over the next 9 years. The \$5.6M investment is the level required compared to the less than \$400k (on average) annual investment that has been made in recent years. Kings' proposal has been presented to NSTIR, the Department of Municipal Affairs and Housing, and most recently, provided to the Minister of Finance and Treasury Board.

### J-Class Roads Relative to Villages

Councillors and Staff have received feedback from the Villages concerning the Priority List. Staff has taken a fresh look at the Priority List and confirmed that there were some roads omitted from the Priority List presented on October 3, 2019. Those roads have since been evaluated by staff per Policy, the results of which do not impact the proposed rankings for next five (5) years.

As discussed above, many of the concerns expressed by the Villages are moot without major investments present-day in J-Class roads. Our modeling indicates that if the Provincial J-Class Road Resurfacing program continues as is, over 50% of the roads will meet our "High" Priority criteria by 2026. If this comes to pass, our current rankings past 2025 will be meaningless.

Thus, staff recommends submitting the Priority List as presented in Appendix A to NSTIR for 2020.

Starting in fiscal 2021-22, staff are recommending that Villages be provided the opportunity to prioritize the annual kilometers produced by the Kings' model within their Village prior to NSTIR submission. This annual approach is being suggested in recognition of J-Class roads also being located in unincorporated areas of the County, and that on the ground road conditions and resulting priorities can change from year to year. Villages need to be cognizant that final approval rests with NSTIR as the roads are owned by the Province of Nova Scotia.

In essence, Kings has produced an asset management plan designed to immediately recapitalize the worst J-Class roads while investing in remedial maintenance to extend the lifecycle of the roads presently in an acceptable condition. The plan involves long-term debt and annual contributions. A proposed financing program has been presented to the Province. It is not inconceivable for the Villages to finance part of the program. To this end, staff are recommending that the August 2, 2019 proposal provided the Honourable Karen Casey be presented to the Villages together with other pertinent information to allow the Villages to consider their role in program financing.

### FINANCIAL IMPLICATIONS

- None at this time. The proposed Priority List is simply a "wish list" for DTIR's consideration.
- Staff will bring forward a proposal to fund the Municipality's portion under the Agreement during the upcoming budget deliberations.



### Municipality of the County of Kings Request for Decision

### STRATEGIC PLAN ALIGNMENT

Check Applicable	Strategic Priority	If Checked, Provide Brief Explanation
	Good Governance	
	Environmental Stewardship	
	Economic Development	
	Strong Communities	
$\checkmark$	Financial Sustainability	Asset management will lead to fiscal sustainability
$\checkmark$	Supports a Strategic Project	J-Class Roads is a listed project within the Strategic Plan
	Supports a Core Program Enhancement	
	Not Applicable (explain why project should be considered)	

### ALTERNATIVES

No alternatives are being recommended

### **IMPLEMENTATION**

- Upon Council approval, Director of EPW and Municipal Clerk will submit the approved roads for fiscal year 2020-21 and Motion Attestation Form to DTIR per the Agreement.
- DTIR will provide written correspondence regarding which Village/Subdivision Roads they have approved under the Agreement.
- Staff will present DTIR's proposal to Council for final review, which must be completed within 20 business days of receipt.
- Meetings convened with the Villages to review Kings' proposed asset management plan.
- Village input on road submissions, specific to jurisdictions, commences for fiscal year 2021-22 list submission to NSTIR

### COMMUNITY ENGAGEMENT

- No community engagement has been undertaken. The Cost Sharing Program has been discussed on several occasions at Council and Committee of the Whole.
- Priority List has been developed consistent with the Village/Subdivision Road Paving Priority List.

### **APPENDICES**

- Appendix A: Proposed 2020 Priority List
- Appendix B: Proposal for: J-Class Road Joint Asset Management Plan

### **APPROVALS**

Scott Conrod, Chief Administrative Officer

Date: October 11, 2019

Appendix /	Ą
------------	---

			Ro	ad Submission Lis	t from the Municipality of :	KINGS		Ple	ease request this	document	
					Submitted By:		so it can be filled out				
					Date (M/D/Y) :	DRAFT	DRAFT electronically.				
*If the below columns are not filled in, the list will be rejected by the Province and you will be asked to re-submit with the information that is required.										quired.	
*In order of Priority	Authority # (Please contact Road Section Road Class area (Please manager if contact area n order not manager if Priority known) not known) Road Name		From	From To		Current Surface Type (if a road has multiple sections and different surface types they must be listed seperatly and counted as two priorities - ex. below)	Treatment Type Requested (paving, double chip or repaving)	Comments (Example: district name/subdivision name/ etc)			
Examples 1	0123	1	J	Jane Road	Route 66	Smith Road	1.2	asphalt	repaving	Smith Subdivision	
2	0123	2	J	Jane Road	Smith Road	end of listing	1.5	gravel	paving	Smith Subdivision	
3	8765	1	1	Smith Road	Jane Road	end of cul de sac	0.35	chip seal on sand seal	paving	Smith Subdivision	
4	0765	3	н	High Road	Route 79 easterly	end of listing at turning circle	0.85	gravel	double chip	District A	
PLEASE FILL I	N THE BELOW	ELECTRONICALL	Y (NO HAND WI								
1	KI1210	001	J	Chapel St	RTE 221 (0221)	RTE 358(SCOTTS BAY RD)	1.29	Asphalt	Repaving	Canning	
2	KI1231	001	J	Applecrest Dr	BELCHER (0488)	CHARLES (1232)	0.344	Chip Seal	paving	Stead S/D, North Kentville	
3	KI1236	001	J	Richard St	MORTON (1235)	CUL-DE-SAC	0.268	Chip Seal	paving	Stead S/D, North Kentville	
4	KI1234	001	J	Frank St	CHARLES (1232)	END OF LISTING	0.104	Chip Seal	paving	Stead S/D, North Kentville	
5	KI1233	001	J	Stead St	CHARLES (1210)	CUL-DE-SAC	0.293	Chip Seal	paving	Stead S/D, North Kentville	
6	KI1235	001	J	Morton St	CHARLES (1232)	END OF PAVEMENT	0.264	Chip Seal	paving	Stead S/D, North Kentville	
7	KI1204	001	J	Pleasant St	RTE 221 (0221)	Water (1206)	0.5	Chip Seal	paving	Kingsport	
8	KI1206	001	J	Water St	LONGSPELL (0407)	PIER (1304)	0.322	Chip Seal	paving	Kingsport	
9	KI1205	001	J	Church St	RTE 221 (0221)	LONGSPELL (0407)	0.361	Chip Seal	paving	Kingsport	
10	KI0741	001	J	Kaiser Lane	CAMBRIDGE MOUNTAIN (1354)	CUL-DE-SAC	0.897	Gravel	paving	Cambridge	

\*Please limit priorities to a maximum of ten due to the current funding limitations of the Province.

### **Proposal for:**

## J-Class Road Joint Asset Management Program

### August 2, 2019



Provided to: The Honourable Karen Casey The Honourable Lloyd Hines The Honourable Chuck Porter



Appendix B

Provided by: Peter Muttart, Mayor Municipality of the County of Kings 902-690-6132 <sub>Special Council 2019/10/15 Page 7</sub> mayor.muttart@countyofkings.ca

# **Discussion Points:**

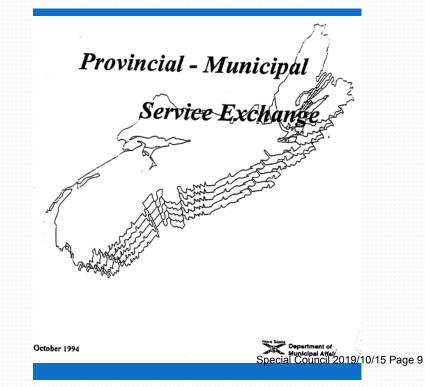
- Our Present-Day Program Rapidly moving toward a physical, financial, infrastructure & public-relations precipice.
- 2. Our Proposed Program Classic "interrupter" with a sustainable solution into the foreseeable future.
- 3. Our Value Proposition
- 4. Modification Requirements Current Program
- 5. Kings as a Proof of Concept
- 6. Recap and Next Steps



# **Present Day Program**

Genesis: 1995 Provincial-Municipal Service Exchange

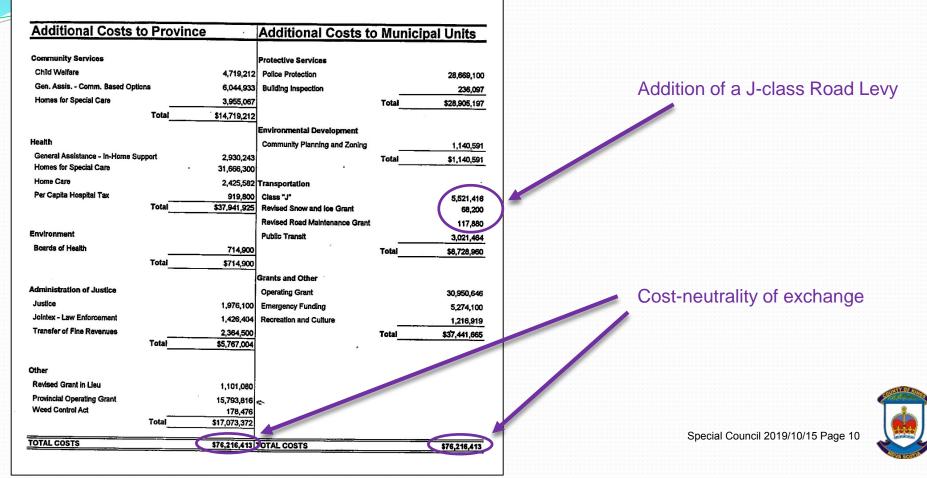
- Intended to be a cost neutral exchange of programs between the two orders of government
- Exchange introduced a per Km maintenance levy on ~1,600 km of local roads (in part to address cost neutrality)





#### Provincial-Municipal Service Exchange Revised Proposal Calculated Using 1993-94 Data

October 27, 1994



# Present Day Program – Con't

From Kings' perspective, it is important to note:

- Municipal costs/savings were not scaled but considered in aggregate within overall balancing between the Province and Municipalities:
  - Kings' would have had relatively lower community service costs compared to exchange for policing.
  - The number of cost-shared kms of local roads in Kings at 135 is the highest of all rurals.



# Present Day Program – Con't

From Kings' perspective, it is important to note:

- Municipal costs/savings were not scaled but considered in aggregate within overall balancing between the Province and Municipalities:
  - Kings' core services are likely to be the highest of all rurals, e.g., the operation of 13 wasterwater systems, 7 Villages, and full land use (zoning) controls throughout.
  - Kings does not participate in the Provincial equalization program.



# 1. Present Day Program – Con't

Specific to Local Roads:

- 1995 Provincial-Municipal Service Exchange <u>maintenance levy</u> augmented by an annual \$4M <u>cost-shared capital program (</u>\$2M from NSTIR)
- NSTIR <u>capital program</u> instituted in recognition "...that many roads have not been maintained to an adequate standard. Another was the significant capital costs of road construction or rebuilding." (DMA 1994)



Region	Service - Exchange Km's	% of Total	
REGIONAL MUNICIPALITIES	Exchange Km s		
Cape Breton Regional Municipality	209.7	12.7%	
Halifax Regional Municipality	640.6	38.9%	
Region of Queens Municipality	53.1	3.2%	
Sub-total	903.5	54.8%	
RURAL MUNICIPALITIES			
Municipality of the County of Kings	135.2	8.2%	
Municipality of the County of Colchester	106.2	6.4%	
Municipality of the District of Lunenburg	79.1	4.8%	
Municipality of the District of Hants East	64.3	3.9%	
Municipality of the County of Cumberland	41.6	2.5%	
Municipality of the District of Chester	36.0	2.2%	
Municipality of the District of Hants West	33.7	2.0%	
Municipality of the County of Pictou	30.3	1.8%	
Municipality of the County of Richmond	29.9	1.8%	
Municipality of the County of Inverness	28.9	1.8%	
Municipality of the County of Annapolis	28.4	1.7%	
Municipality of the County of Victoria	24.6	1.5%	
Municipality of the District of Argyle	23.8	1.4%	
Municipality of the District of Barrington	16.8	1.0%	
Municipality of the District of Guysborough	15.1	0.9%	
Municipality of the County of Antigonish	15.0	0.9%	
Municipality of the District of Yarmouth	14.7	0.9%	
Municipality of the District of Digby	10.4	0.6%	
Municipality of the District of Shelburne	6.2	0.4%	
Municipality of the District of St. Mary's	4.9	0.3%	
Municipality of the District of Clare		0.0%	
Sub-total	745.0	45.2%	
TOTALS	1,648.5	100.0%	

\_\_\_\_\_

### Service Exchange Kilometers - 1995



# **Capital Program**



## 1995 Launch

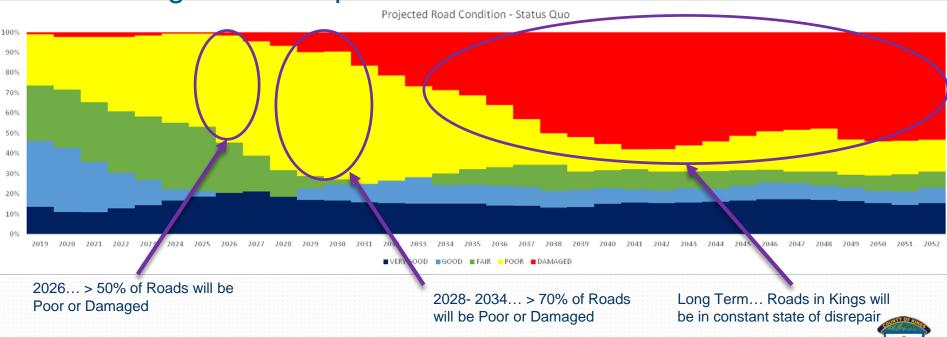
- Capital program: "Temporary" measure
- Maintenance
  - Funded on per km rate
  - Covers winter maintenance, patching, etc.
  - Indexed to CPI
- Capital Renewal
  - \$4M annual for ~1,650km of road
  - Not Indexed

## Where Program is now

- Capital program: Effectively Permanent
- Maintenance funding not keeping up
  - Construction inflation > CPI
  - Resources being pulled to other areas
  - NSTIR is relying more heavily on contracted services
  - Capital Renewal cannot keep up
    - 1,650 km x \$250k per km / 30 years = \$13.7M per year
      - \$4M represents 30% of required investment
    - Exponential degradation of roads Special Council 2019/10/15 Page 15



## 1. Present Day Program Kings as Example of Cost-Shared Roads



- Projection based on \$400,000 total annual funding
- Based on a 2018 independent condition survey of 128 of the 135kms of roads

# 2. Proposed Program

Municipalities agree to:

- Prepare a prioritized list of J-Class roads through the use of industry norms and practises.<sup>1</sup>
- Forecast investments intended to extend the lifecycle of roads at an acceptable (rated) condition through resurfacing and remediation investments.
- Borrow money to resurface the roads identified on the prioritized list.
- Establish a *dedicated special reserve* fund through which capital and remediation expenditures are to be made. Monitor and report progress.

1. The list of J-Class Roads is to be based on listings provided to individual municipal units by the Province of Nova Scotia in 1995.



# 2. Proposed Program – Con't

Municipalities agree to:

- Annually budget funds for transfer to and from the *dedicated special reserve* to retire associated capital debt and fund remediation work.
- Enter into a formal Agreement with NSTIR.
- Not participate in the Provincial \$2M annual program except through the Agreement as described herein.



# 2. Proposed Program – Con't

### **NSTIR** agrees to:

- Consider the asset management plan provided by a Municipal Unit, including without limitation a prioritized list of capital work, within a structured Agreement as described herein.
- Provide 50% of agreed to costs (net of reserve interest) over the term of the agreement (n.b. to be allocated from the \$2M annual program).
- Undertake annual remediation program covered by program Agreements.
- Review program progress with a Municipality at times listed within the Agreement.



# 3. Value proposition

- Time value of money: An annually matched provincial/municipal program permits borrowing for upfront capital investment and ongoing remediation funds.
- Increases road lifespan, thereby lowering overall costs.
- Eliminates inflationary pressures (addresses significant increasing costs over time).
- Addresses significant deferred maintenance issues.
- Significantly increases funds available for maintenance through municipal contribution.
- Economies of scale
  - Reduces mobilization costs (directs more \$ in paving)
  - Larger contracts and greater competition = reduced costs per km



### 4. Modification Requirements – Current Program

- Without limitation, suggested modifications include:
  - Enabling NSTIR to enter into multi-year funding Agreements with Municipalities.
  - Allow aggregation of J-Class tenders to meet or exceed Tangible Capital Asset (TCA) thresholds, or lower TCA thresholds.
  - Permit the use of funds within a remediation component of the program.



# 5. Kings as a Proof of Concept

### Condition Assessment

 In 2018 Kings engaged Englobe Corp. a subject matter expert to evaluate the condition of ~128km of the 135km of J-Class roads through use of the International Roughness Index (IRI) classification system.

### Trend Analysis

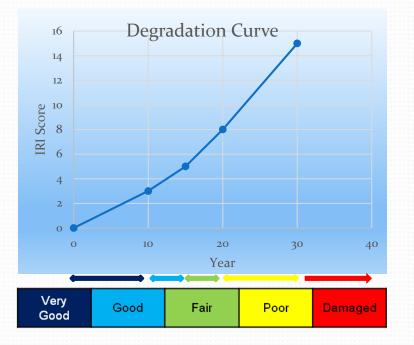
- The Englobe data was then compiled in a trend model to project conditions of the roads over three complete lifecycles (resurfacing with and without additional remediation funding).
- The trend data was used to compare outcomes of three scenarios (compared to status quo) the objective was to determine which scenario maximized the number of roads in "good" condition in the least expensive manner.

### **Financial Modelling**

 A cash flow model has been created to project debt servicing requirements and an ending cash position at year fifteen.
 Special Council 2019/10/15 Page 22



### Kings Condition Index (Englobe/Kings)



Very Good	No maintenance required
Good	Minimal maintenance (e.g., crack sealing)
Fair	Micro-surfacing, sealing to maintain and extend life
Poor	Patching, resurfacing, subgrade repairs
Damaged	Full Replacement

16

Special Council 2019/10/15 Page 23

\* The Municipality's trend model follows this curve

# **Kings Option Analysis**

Benchmark:

Assumed combined \$400k annual investment (part of present day J-Class Road program)

### **Options:**

1. Full Funding:

2. Paving:

3. Pave & Remediate:

Full annual funding for all 10 submitted roads (part of present day J-Class Road program)

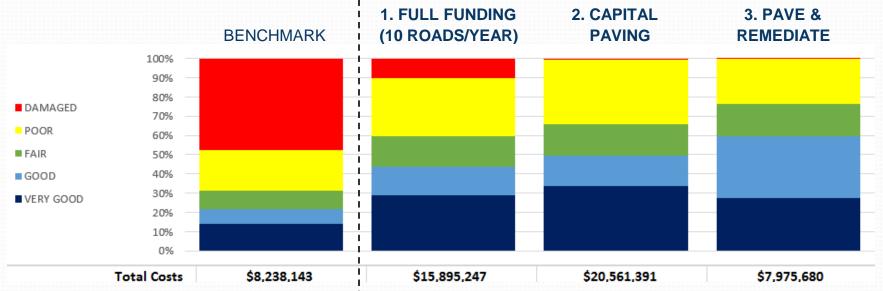
Paving of 135km in a 30 year cycle (proposed program)

Capital paving scenario and capital remediation (proposed program)



# **Kings Option Analysis**

н





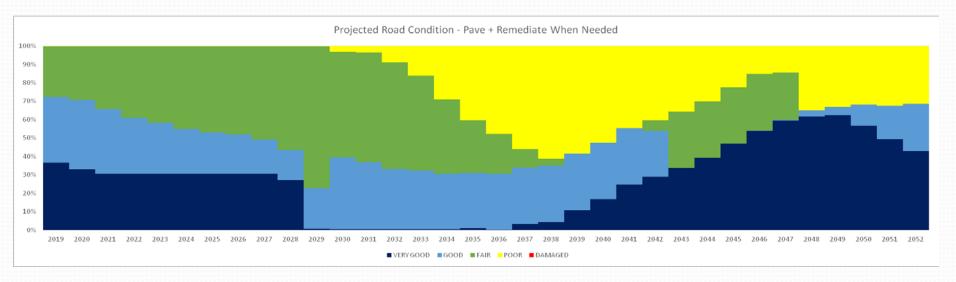
# **Kings Conclusion**

• Options 1 and 2 are more expensive than option 3

- Option 3 produces a better product at a lesser cost
- Option 3: Capital Paving with Remediation is the recommended option



## Kings Conclusion – Capital & Remediation





## 5. Kings as a Proof of Concept

Costs:			
Capital Paving (year 0)		\$ 5,631,750	
Remediation (years 0 to 8)		2,343,930	
		7,975,680	
Interest on Long-term debt		1,510,800	
Bridge financing (on year 0)		194,295	
Reserve balance year 16		3,000,000	
		\$ 12,680,775	
Funding:			
Province of Nova Scotia (year 0)		\$ 450,176	
Province of Nova Scotia (year 1-15) amt. per yr	384,385	5,765,776	
		6,215,952	
Municipal		6,215,954	
Interest earned on reserves		248,869	
		\$ 12,680,775 Cou	ncil 2019/10/15 F



## 5. Kings as a Proof of Concept

### **Results: Financial Modelling**

- Based on a 15 year cash flow model
- A fifteen-year commitment of \$6.2M (~\$450K year 1, ~\$384K years 1-15) for both parties:
  - \$5.6M in year 1 paving;
  - \$2.3M in (new) remediation work between years 1 8; and
  - Projects a reserve at the end of year 15 of \$3M (to be used for new capitalization in year 16).
    Special Council 2019/10/15 Page 25



## 6. Recap and Next Steps

- Institute a Joint Asset Management Program based on:
  - Agreements that include:
    - Prioritized condition assessments (municipality)
    - Capital borrowing and creation/use of a special reserve (municipality)
    - Funding of capital and remediation work (municipality/NSTIR)
    - NSTIR/Municipal funding provided in each year over the term of the Agreement.
- Next step
  - Modify current program
  - Initiate partnership
  - Given scale and road condition use Kings for program development, 2019/10/15 Page 30



J-Class Road Program Reserve Fund Cash Flow

Pro forma

		0	1	2	3	4	5	6	7	8	
	Notes	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total
Opening Fund Balance			(117)	99,030	187,007	101,267	107,685	153,822	83,509	143,367	
Inflows:											
Bridge Financing -Paving Costs	2	5,631,750									5,631,750
Annual Provincial Contribution	3	450,176	384,385	384,385	384,385	384,385	384,385	384,385	384,385	384,385	6,215,952
Annual Municipal Contribution	3	450,178	384,385	384,385	384,385	384,385	384,385	384,385	384,385	384,385	6,215,954
Interest on Reserves			(3)	2,278	4,301	2,329	2,477	3,538	1,921	3,297	248,869
Outflows:											
Debt Service		(194,295)	(555,088)	(545,739)	(535,688)	(525,063)	(513,939)	(502,495)	(490,702)	(478,627)	(7,336,845)
Paving Costs	4	(5,631,750)									(5,631,750)
Remediation Costs	4	(706,175)	(114,533)	(137,332)	(323,123)	(239,618)	(211,172)	(340,125)	(220,131)	(51,720)	(2,343,930)
Ending Fund Balance		(117)	99,030	187,007	101,267	107,685	153,822	83,509	143,367	385,087	3,000,000
										ŀ	vailable for

**Future Paving** 

#### Notes:

1. Years 9 through 15 only include debt servicing (columns are not shown for ease of readability)

2. Bridge financing for paving will be obtained through the municipalities financial institution and then debentured through the

Nova Scotia Municipal Finance Corporation once paving is complete

3. Additional Contributions of \$130,000 are required in the first year to offset higher remediation costs in year one.

4. Based on 2018 independent survey of roads by Englobe Corp.

